The School Arts Book

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TO STUDENTS OF DESIGN*

ARTISTS differ, of course, as doctors, even doctors of science, differ; but on the broad facts of good design, good craftsmanship, and so forth, they are quite as much of one mind as men of science—however differently they may express themselves. I believe that most artists would be with me in what I have to say out of the experience of a working artist. Science has a direct bearing upon art, and especially upon design. I suspect it will be more of a surprise to students of art than to students of science to be told that there goes to design a certain element of science. I don't say it goes equally to all art. Science, they say, is systematized knowledge; and the artist does not work by system; but it is those who have some method in their madness who arrive; and the greatest artists—the Michael Angelos—achieved what they did because they were something more than artists.

The relation of design to handicraft is obvious. There is no artistic handicraft which does not presuppose design, and no practical design which is independent of conditions of execution—that is of handicraft. Design does not begin to be practical until it takes account of execution. Every design is properly the solution of a problem—technical or artistic—ordinarily both at once—how under given conditions to produce a thing of beauty. For remember, art makes for beauty, may be of a modest kind, better perhaps of a modest kind, but always for beauty. That is nowadays often overlooked—sometimes even denied. But, all the same, it's true—and if it weren't, what would be the use of art? . . . . . .

*The principal part of an address to the students of the Sir John Cass Technical Institute, England, on the occasion of the Annual Prize Distribution, Dec. 16th, 1908.

We make a great fuss sometimes about the historic derivation of familiar ornament, and the influence of one time or country upon another. And that, too, is interesting. But in many a simple craft—such, for instance, as working in filagree—we see, without possibility of doubt, how the pattern grew out of the craft, how workers in wire, for example, could not help happening upon those patterns—and how, no matter where they worked, or when they were working, they arrived perforce and independently at almost identical results. In the same way our great-great-grandmothers arrived at needlework far more truly artistic than much that goes by the name of art needlework—though nothing would have surprised them more than to have been told they were artists. Probably it would have shocked them very much.

Here, then, is the beginning of design. The craftsman has only to manipulate his material and to do what his tools suggest, and he arrives at something—possibly quite satisfactory—certainly appropriate to metal work, needlework, or whatever it may be.

It seems, then, that design is within the scope of any and every worker. He may feel himself empty of invention, he may know himself absolutely incapable of putting anything down adequately on paper—and yet there is within his reach, and easy reach, an infinity of beautiful pattern, which is, for many purposes, as far as design has any occasion to go. That is, in point of fact, as far as the craftsman, as such, need go. But this much—I am afraid it is necessary to say—is only the beginning of design; and the system of design-teaching founded more or less upon what "happens" is admirable only as the introduction to design, to the art of design I mean. That does not come by playing about with units in the hope of something happening. It is not a matter of accident, but of purpose. Playing with "units" is after all play—and child's play, compared

with serious design. That is play, too, if you like; but it means playing the game—playing it according to strict rules. Mind, there is no winning without playing the game. And where would be the satisfaction in winning without playing it?

Serious design only begins when the workman, having realized the way that patterns are built up, and learnt by experience the kind of forms that lend themselves to his purpose, plans the structure of his pattern and invents the details of it. He sees beforehand what he is going to do. And, by way of seeing it clearly, puts it down on paper—not every item of it, perhaps—there are details best left to the spur of the moment, if he is going to execute it himself, and some which must be left to be worked out in execution—especially in some forms of metal work.

It is the fashion just now to decry "paper" designers. As one of them, I cannot, naturally, join in the chorus of abuse. When it comes to anything above design so humble that it scarcely counts for design, paper seems to me a necessity. (I say paper, because my own work happens to be mostly on paper; but modelling-students have only to read for paper clay or wax, and what I say applies to them equally—or nearly so.) Putting it on paper helps the designer to see his design in advance. It enables him to test it, to amend it, to play variations on his first thought, to bring it to perfection—and that without the loss of time and waste of material involved in actual experiment. If there is any difficulty in it that can only be solved by actual experiment—well, he can make the experiment while the design is in progress; but an accomplished and experienced designer forsees the execution of his work. That is really the difference between him and the craftsman (of course the two may be one). The artist who never knows what he is going to get until he has got it, is hardly a designer—though he may arrive at design. . . . . .

Every workman has in him something of design—enough to serve him in his work; but he is not therefore a designer. We have most of us, let us hope, some touch of poetry in our composition; but how many of us are poets? There are people who think that everyone would be able to design if only he were left to himself. Education is supposed to be the blight of invention! Nothing of the kind. Invention is, and always will be, a very rare thing; and if right education fails to bring it out, it is simply because it wasn't there. . . . . .

Now, the quality of qualities in Design is Fitness. The only design worth looking at is that in which fitness is observed, in which the treatment is appropriate. You learn to appreciate that in the practice of a craft. You learn to appreciate it better still by the study of what, so far, good workmen have done.

Oh! but Nature, you say, is the source of it all. Yes—the study of Nature goes without saying. And it is so universally enforced that there is no need to dwell upon it here. What is not so generally insisted upon is the necessity, not only of treatment (it is impossible to overlook that in a craft school) but of the study of what from first to last has been done in the way of design. Emphatically Nature is not enough. It does not teach you the use to make of Nature. That you learn of art, from the work of others, and most readily from old work. I urge you to study that for all it is worth—and it is worth almost everything—not because it is old, but because time was when conditions were more favorable to design, and because what is old has been so thoroughly sorted out by time, that it is mainly the best that survives to this day. And, if nature is not enough, neither is the workshop enough: there are many more kinds of treatment than it is possible to practise in any one workshop or in any school.

You will in the end adopt your own treatment. You are you, and you live in the 20th century; but until you know what

has been done, and how it has been done, and why it was done, you are hardly in a position to know what to do, or how best to do it. Invention itself is not so independent of all that has gone before as you may imagine. When students think they are most original they are often only doing what everyone else is doing, what is in the air. Don't bother about originality—and don't be afraid of not being new. Novelty is not worth the price of beauty, which is commonly paid for it. It is of no use trying to be new; the thing to try for is good work, beauty, the right solution of the problem before you. And never mind who says your work is not modern—if it is good. If there is grit in you it will be modern. . . . . .

The fact is, there are two kinds of persons: to one the thing done by another suggests the doing of something like it—imitation; to the other it is a challenge, provoking opposition. If you belong to the one class, teaching will, of course, fail to bring out what is not there; if you belong to the other, the example set before you will be an irritant exciting you to do something else. . . . . .

What does hamper design and destroy originality is the constant and deliberate imitation of something done—spoiling a good thing, as someone said, and calling it your own.

As with old work, so with Nature. In designing, never copy; don't work from the model, nor yet from your drawings of it, but from memory—that alone is plastic enough for the purpose of spontaneous design.

If only to cultivate your taste, upon which, in craftsmanship, so much depends, go to the museums. Lose no opportunity of study. Don't imagine you can do without the impulse and enlightenment that come from the loving study of the best. And it is not only art that counts—its practice, its history, the theory of it—but wider all-round education. Especially if you

mean to design, you must train your wits as well as your eyes and hands. Art is very much a matter of the senses. There are arts in which it is permitted to be rather stupid; but design is a logical faculty, making demands upon the reason. It wants brains. . . . . .

Artists are too much given to railing against "commercialism," even those of them who have a keen eye to the main chance. Is not every artist in a sense a tradesman? Doesn't he produce something for sale, and get the best price he can for it? unless, indeed, he is one of those impossible people who think that art is an excuse for everything that makes for bad citizenship. For once, let an artist own there is not so much amiss with commerce. The mischief is that we are apt in these days to lose sight of all but commerce. The root of the evil is the magnitude of modern commercial transactions. They necessitate a man of business at the helm—and he steers carefully clear of the difficulties of art. That being so, there seems room, also, for production on a scale modest enough to allow of artistic conduct.

The more purely commercial manufacture becomes, the greater our artistic discontent with it; and the greater the necessity that we who care for it should cherish what remains of art and craftsmanship, should take care of it, plant it in favorable soil (say, here at Aldgate), tend and cultivate it (in this Institute, for example) and create for ourselves, here and there, some little oasis in the desert of utilitarianism, where the craving of those who thirst for the beautiful may still from time to time be satisfied.

Men do not realize (or act as if they didn't), all that they have sacrificed, and are sacrificing, in the interests of trade—the beauty of the world we live in, the satisfaction of doing good work, the joy of life depending on that beauty and that satisfaction.

Only think what the divorce of art from handicraft means to us! It means the loss of all delight in making, of all joy in

the possession of things made! And what a joy it is! Talk of the pursuit of pleasure! it is nothing to the pleasure of pursuit, a pursuit one can be proud of.

It takes perhaps a maker of things to relish all the joy of doing. And the better the maker the greater his delight in making. Selling is by comparison a sordid pursuit, buying an idle one. In making a man is at his best, his manliest.

But this high estimate of making implies *well* making. There is no sort of satisfaction in making ill. . . . . .

Think, then, what a serious thing it is when industrial conditions make it ever less and less possible for a man to like his work, or take pride in it. Once separate business from pleasure, and you eliminate art from workmanship. . . . . .

The whole argument for technical training is just this—that, though the trade outlook is too narrow, academic education is too diffuse to be of all the use it might. The idea used to be: "give young people a good education and they are fit for anything." Yes; for anything except earning a living! That is the point at which craft schools come in. The nearer, therefore, they approach the workshop the better. I mean, of course, the ideal workshop—the sort of workshop that never existed and never will—a workshop where the master's first and only thought is good work; where the manager's one endeavor is to teach the workman how to do it; where each foreman is not only a specialist in his own department, but an artist or a man of science too. Fancy working in such a shop! What an education!

. . . . . .

It will not do to take too narrow and "trady" a view of education. There could be no greater mistake on the part of trade students than not to work at drawing, modelling, and design. They may not see the use of it; but it is a most valuable part of technical education. . . . . .

I don't want anyone to think that art or craftsmanship (or anything worth doing) is easy—that any success worth having is to be reached without hard work, without grinding at studies that are in themselves without attraction. I want students to take up the work they care for, and to care for it so much that they are willing to go through the necessary drudgery for it. We talk of men choosing a profession or trade; but, in the case of those who are to go furthest, it is the profession or trade that chooses them. They take to it, not because it is pleasant or easy, or because there is money in it, but because they are drawn to it; they can't help it. An artist takes to art, a scientist to science, because that is the work he feels to be his.

And, just as there is no satisfaction greater than that of doing the work it is in you to do, so there is no surer way to success than the taking up of that work. If the drudgery it involves deters you, then you may suspect it is not your work. The born workman is not easily scared from his work. On the other hand, it will never do to be faint-hearted. If your work is a pleasure to you, stick to it. Whatever the hindrances to success, devotion will overcome them. In work, as in life, it is true that "love will find out the way."

It follows that if you love your work you will be content with nothing short of good workmanship and workmanlike design. Honesty, they say, is the best policy; but if it is only policy it hardly amounts to much in the way of honesty. "Who wants good work?" it may be asked; "they want it cheap!"

Whether it is wanted or not, whether or not you get credit for it or advantage by it, you will persist, nevertheless, in doing your best, if only for your own satisfaction. To be satisfied with less is to shut out all hope of higher things. Stop at what will "pay," and you will stop short of what is art.

Men with their living to earn can't, I know, disregard the economic side of work. But, apart from the fact that it is art which in the end raises craftsmanship to its full height, it is something more than what is done for a wage that in the end makes for good wages. . . . . .

I have already pronounced against the theory that education is a check on originality. It checks a good deal that is in need of checking—that is one of the uses of education—but that it is seriously detrimental to originality is not true. There is no keeping originality under. It will out, as sure as murder. That it does not come out in more cases than it does is because it is in the nature of things rare. If it were the common thing some people seem to imagine it is, we should think nothing of it. All this fear of extinguishing the fire of invention implies only the feeblest spark of originality. If it is so feeble as all that, why nurse it so carefully? The first puff of adversity will blow it out. The originality which is worth preserving wants no coddling.

And what is more, original minds don't think much about originality. They are original—often without knowing it. A poet once said, that you had only to write your grandmother a letter, and he could tell from it whether you were a poet. Don't imagine, then, that you are only a poet when you are writing an epic, only an artist when you are producing a masterpiece, only original when you are doing something no one ever did before. . .

Time only will show which are the great artists, the great inventors and discoverers. They will come to their own in due time; they have only to stick to their work, to think of that, not of their possible greatness. The true ambition is to do, not to win prizes, either in the world or at school.

LEWIS F. DAY
London, England

DESIGN AND TWO TRADES

BEFORE planning a course in design for the Boston Trade School for Girls, I first talked with a great many dressmakers and milliners, in order to discover what artistic training or native artistic ability each one had, which contributed to her success. In the first place I found that almost all dressmakers and milliners make sketches from memory or directly from the model, and they all said, either "Yes, I can draw quite well, I am thankful to say," or—"I wish that I had been taught to draw better." And so sketching was made one of the fundamental features of the Trade School design course.

Little by little the artistic needs of dressmakers have revealed themselves, and one by one new problems have been incorporated into the course. Fundamental art principles remain the same, but styles and human fancies change with the seasons, so we change the surface form of our problems, still holding fast to our principles of good design, while submitting to the demand for something new that we find in the world of fashion. This makes us observant and wide awake, and is a good thing after all. We can stick to our principles and yet change our products, even as a chameleon can change his color to correspond with his environment, and yet remain without doubt a chameleon.

Quick sketching from models and memory sketching becomes an exciting pastime when made at an "opening" of new waist, tie and hat models. Great skill of hand and wonderful visual memory can be cultivated by exercise, and it usually happens that pupils who have a firm belief that sketching is impossible to them, forget themselves in the interest of the "opening," and learn to sketch rapidly and well. (See Fig. 1.) I have always found the shops willing to lend their stock for these simulated openings, for the sake of "helping the children."

It is very necessary for incipient dressmakers and milliners to cultivate their imaginations, if they are to be anything more

A sketch at an "opening" of hats and a sketch showing the same hat in use.

in the trade than just blind followers all their lives. There is no better way to do this than to invent designs.

Embroidery is used by both dressmakers and milliners and should be understood by them. One of our first problems is the arrangement of embroidered dots or spots on bands for trimmings, Fig. 2. There are no abstract problems nor abstract spots for dressmakers and milliners and there are none in our design course.

The materials used by the best dressmakers and milliners are kept constantly before the pupils in their design class and are studied and analyzed for color, design and texture. Each

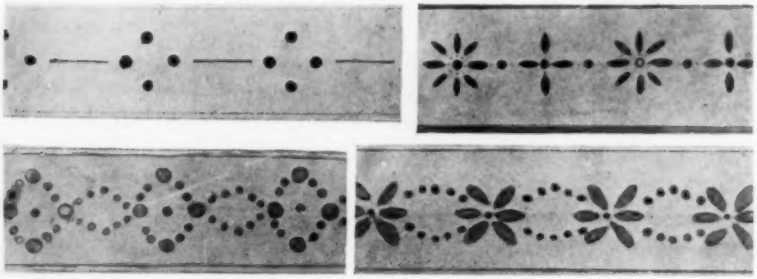


Figure 2. One of the first problems in design is the arrangement of embroidered dots or spots on bands for trimmings.

design problem is worked out in relation to the material which is intended for use in its execution. Hamburgs and laces are studied and designs made involving their use. Original designs are also made for textiles and hamburgs and an effort is made to improve on the trade designs.

Occasionally we adapt a single design for use on four or five different patterns as a corset cover, hamburg-edged ruffle, neck jabot, collar, shirtwaist, etc., and thus obtain a harmonious "set." (See Fig. 3.) At first only the round or oval spot and line are used for motives, so that the whole mind may be concentrated

on arrangement alone; later we use flower forms, Fig. 4, and even a butterfly occasionally creeps in.

We sometimes construct models in tissue paper, Fig. 5, and paint our design upon them in chinese white or color, so

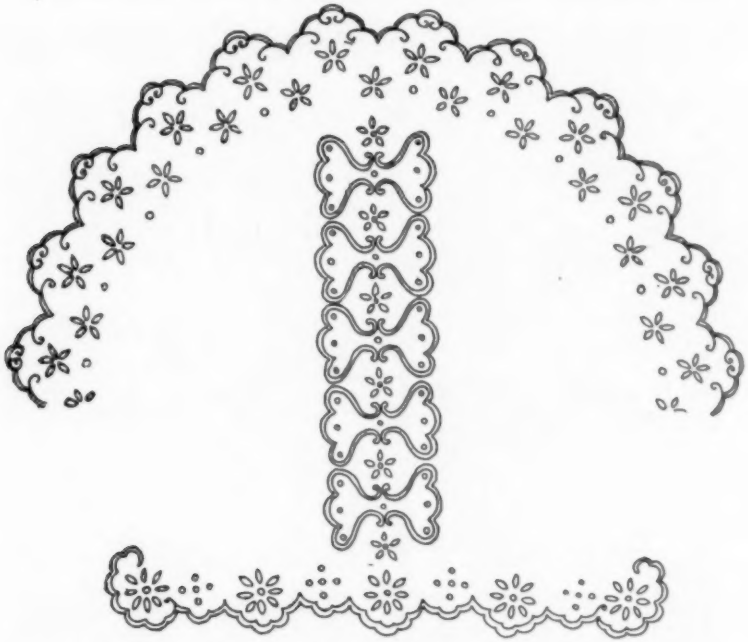


Figure 3. Similar elements adapted to different parts of the costume. (a) Design for the brim of an embroidered hat, by Margare Weisman. (b) Design for a band of ornament for a shirt waist, by Elsie Foster. (c) A collar design, by Margaret Dechaut.

that the whole effect of the design may be obtained, and also so that the pupils may get practice in cutting and tucking and spacing.

We use samples for matching and combining colors. Bits of trimmings and beautiful fabrics are obtainable from dressmakers and milliners.

We exercise the choosing ability as much as possible in the design course, as it is the dressmaker's and milliner's constant task to choose the best from material which is available.

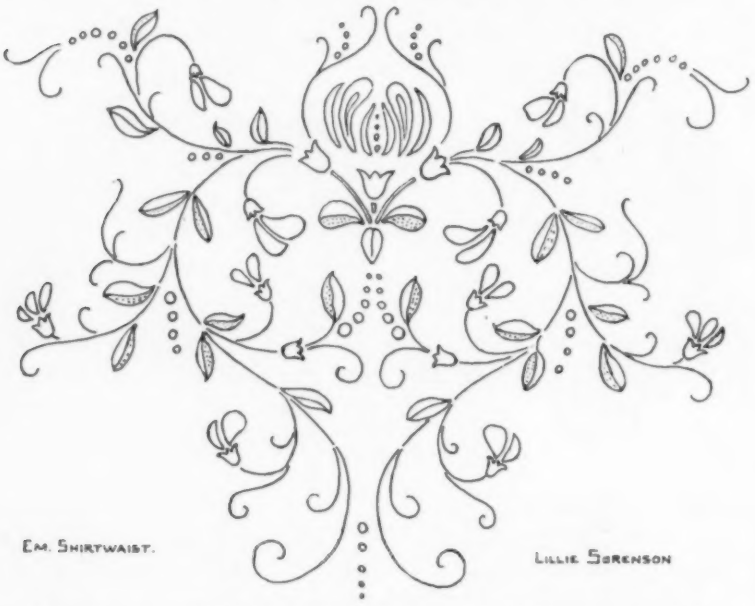


Figure 4. An original design for shirtwaist decoration utilizing natural forms, by Lillie Sorenson.

It is difficult to make costume designs and yet almost anyone can learn to make intelligible ones. Dressmakers and milliners must make them to some extent. Certain principles which we wish to teach in the Trade School cannot be taught except through

making costume designs, Fig. 6. Even the least skilful pupil can usually manage to do it in some way, though some will to the bitter end show a tendency to draw a side-view dress on a front-view figure, à la Egypt.

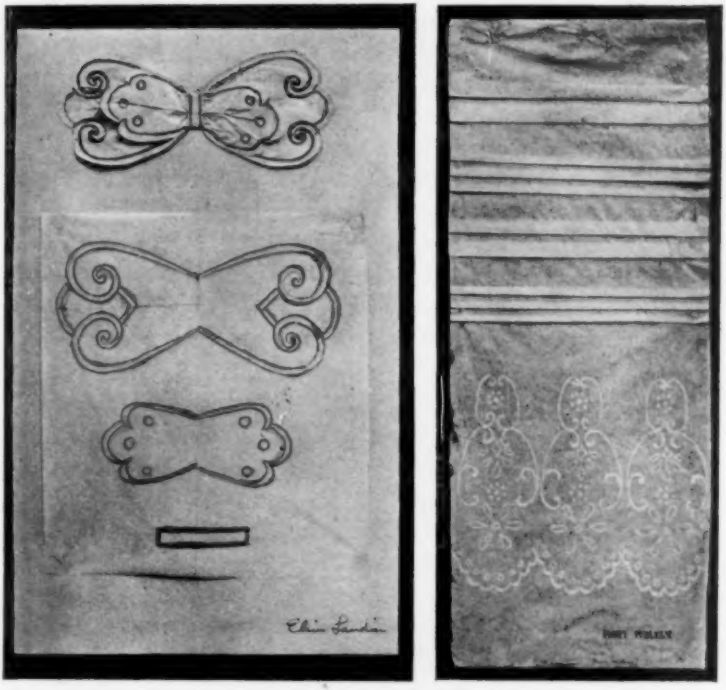


Figure 5. Designs worked out from tissue paper to give practice in cutting, tucking, and spacing.

First we do a great deal of copying and selecting and thinking, and then we each make a paper doll representing ourself, strictly front view, and proceed to create a wardrobe for this

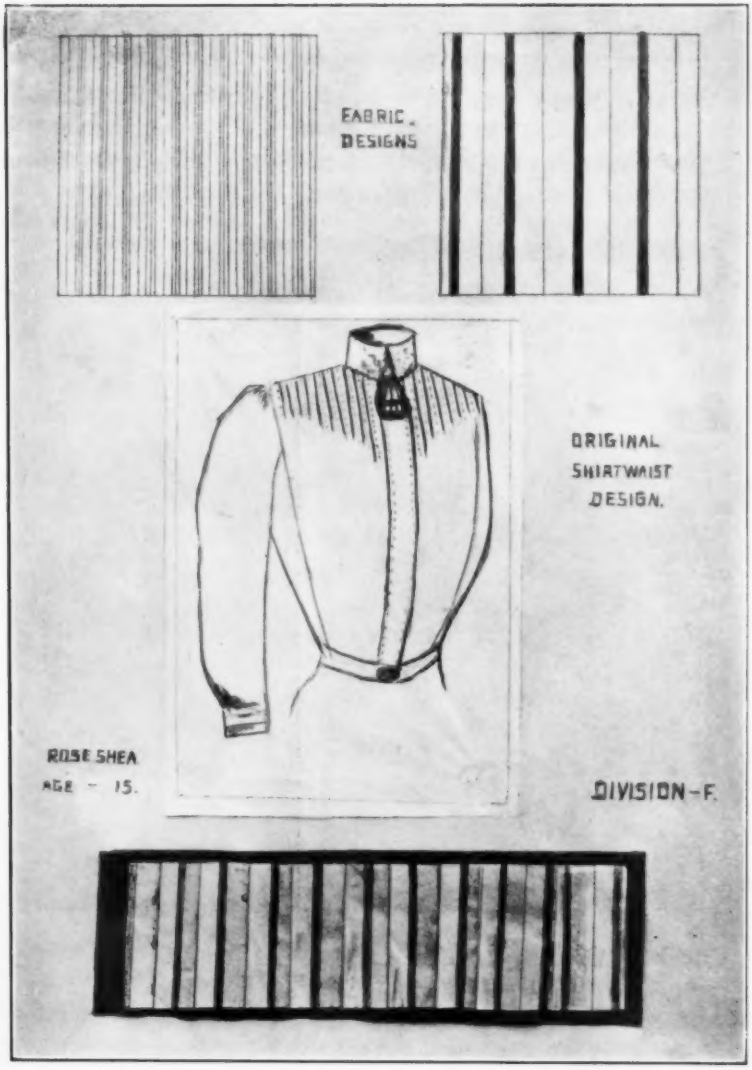


Figure 6. A complete set of designs from fabric to completed costume. The lower design shows the goods plaited from tissue paper to bring out a new stripe pattern formed over the shoulders.

paper doll self, from the fundamentals clear through to the hat, both for summer and winter, for fair weather and foul, for the joyful occasion, and the humdrum shop. In connection with this work many interesting problems come up and are discussed.

Prospective dressmakers and milliners go through the same art training at the Trade School, for is not the success of the hat dependent on its relation to the costume with which it is worn, and must not the dressmaker also consider so important and crowning a glory as the hat?

Problems in braiding designs are difficult but interesting and awake a vivid interest in classic designs in straight and curved lines, which of course makes us want to go to the Art Museum and find out more about these designs, and we always do go, and have a wonderfully interesting time, thanks to the splendid hospitality of the Art Museum authorities. It is very exciting to see our favorite braided design adorning the Parthenon. Shades of the classicists, do you realize that we use the Greek elements for our hamburg designs and that the Egyptian motives make lovely stencils for chiffon scarfs?

In our work we begin by knowing the little, and gradually work outward toward a knowledge of the larger beauty of the world of art. From the small concrete problem we look up to a better understanding of the beauty of all things, in a world where nothing is either great or small, except as thinking makes it so.

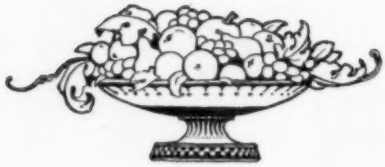
It has been my pleasure during my four years in the Trade School to take many girls to the Art Museum for the first time. In hardly any case has that first trip been the last. We have begun to visit shops and plan shopping tours which will tend to broaden horizons and raise ideals. Dressmakers and milliners should be fed on beauty as much as possible, because of the tremendous power they wield for beauty or for ugliness.

The Trade School provides a one-year course for its pupils and during their whole course they have two design lessons of one and one-half hours each week. Many designs made by the pupils are worked out in connection with their regular work.

The end and aim of the art course is the cultivation of the imagination, discrimination and taste.

GRACE WILSON RIPLEY

Boston Trade School for Girls
Boston, Massachusetts



A MODEL STAND

"NECESSITY is the mother of Invention," an oft repeated proverb but, like the four seasons, ever new. Of course a model stand is no new thing but ours is original in design and consequently of more or less invention.

We felt, in the Normal Class of the Cleveland School of Art, that we must have some kind of a stand upon which we could arrange our still-life studies and also a screen for hanging our work for criticism and other purposes. No money seemed to be forthcoming so we decided to make it.

A model stand and screen in one—that was the problem, to be worked out by the students as a lesson in constructive design. Each one submitted a working drawing of at least two views and a perspective sketch showing how it would look when finished. The results were looked over, criticized, and the best points in each incorporated in the one we were to make.

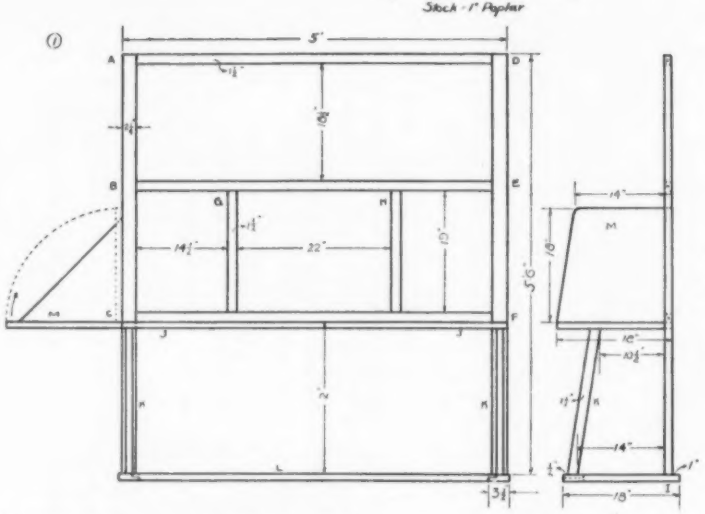
Such questions as these were carefully considered before final proportions were decided upon,—Will it serve absolutely the purpose for which it is intended? What proportion will look well in the class room? Will it be low enough to allow for hanging space on the walls at our annual exhibition? Will it be convenient to move about in order to obtain different lightings on our groups? Is the shelf low enough for studying our perspective problems? Is it high enough to allow for viewing illustrations hung upon the screen from any part of the room?

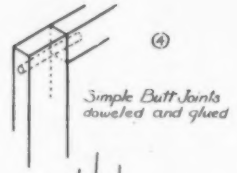
After satisfying ourselves upon these points (as well as many others) we made one complete drawing of the perfected stand. Plate I, Figs. 1, 2. Then one student was allotted the task of making out the Bill of Stock. This done we were ready to purchase the necessary materials, lumber, screws, etc., and make the stand.

The Lumber. Poplar seemed to be most desirable, being light and fairly inexpensive for wood in these days. Again, it

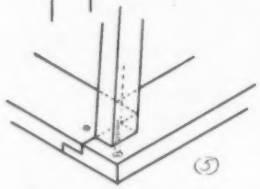
-MODEL-STAND-

Stock - 1" Poplar

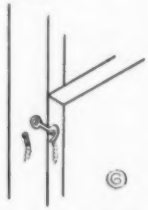




Simple Butt Joints doweled and glued



Detail of construction at base of Stand



Method of fastening end shelf for casting shadows on still-life groups

Designed and constructed by the Students of the Normal Class in the Cleveland School of Art - Cleveland - Ohio - to serve the two-fold purpose of Model Stand and Screen. It was essential to make it extremely light doing away with all unnecessary detail or decoration. Poplar was used. Joints were assembled at the base with screws - at the cross-pieces with ½" dowels, also glue.

③ Bill of Stock

2	pieces	2½" x 3'6"
1	"	3½" x 18"
1	"	1½" x 19"
1	"	1½" x 2"
3	"	¼" x 9" 7½"
1	"	3½" x 9" 8½"
1	"	.15" x 6½"

PLATE-I

is a good wood in which to work if well-seasoned and smooth grained. As we couldn't get strips the widths we desired wider boards were bought, necessitating the use of the rip saw in getting out the pieces. This scheme isn't always advisable for, as one student remarked, "Each strip contained different curves donated by all who used the rip saw." Still they learned most thoroughly its use.

Dressing up the Pieces. From the Bill of Stock, Fig. 3, each piece was laid out, sawed, planed, and sandpapered, ready to put together. This required the use of the marking gauge, plane, cross-cut saw, try square, block plane, muscles, and brains. Then it was ready to put together.

Constructing the Stand. Holes were bored, A, B, C, D, E, F, Plate I, in each of the uprights the size of our dowels, 1-2″, which had been cut in 6″ lengths, and at distances given in the drawing. Holes were also bored in the ends of the horizontal strips from 2″ to 3″ deep. Glue was applied, the dowels driven in as far as they would go,

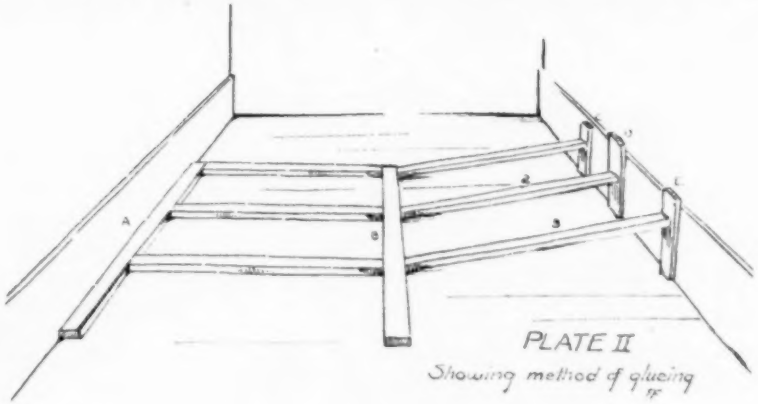


PLATE II
Showing method of glueing

and the ends cut off, Fig. 4. The flat frame was then placed upon the floor, Plate II, with one side, A, against the wall of a room which in one part is quite narrow. Pieces of wood, C, D, E, were placed vertically against the opposite wall for protection, and, wedged tightly between these and the other side of the frame, B, were other strips, 1, 2, 3, drawing the joints tightly together. The smaller vertical strips, G, H, were then placed in position and held by glue and long wire nails, as there was very little pressure bearing on them and stronger joints seemed unnecessary. When perfectly dry the base pieces were screwed to the legs of the frame, Plate I, I, the shelf screwed from underneath to the lower horizontal bar, J, J, and the slanting supports, K, K, screwed in place, Fig. 5. Then followed the horizontal brace at the base in front, L, and last the shadow shelf hinged on the side, M.

Finishing. Our stand was then ready for the finishing touches, smoothing, staining, putting on the casters, and hanging the cloth screen.

We made our stain to match the interior finish of the room by mixing yellow ochre with a touch of Van Dyke brown and benzine. After looking at a dozen or more samples for the screen we decided on Monks cloth of a light brown color, its coarse texture making a most pleasing background.

This was tacked with brass tacks securely to the top of the stand at the back and allowed to hang straight and flat against it. Down either side small brass rings were sewed and, when hanging back of the frame, they were caught over hooks screwed into the uprights, thus making it easy to unhook the rings and drop the screen in front of the small panels, presenting in that case a large plain background for hanging work to be criticized or illustrations of various kinds, Plate III.

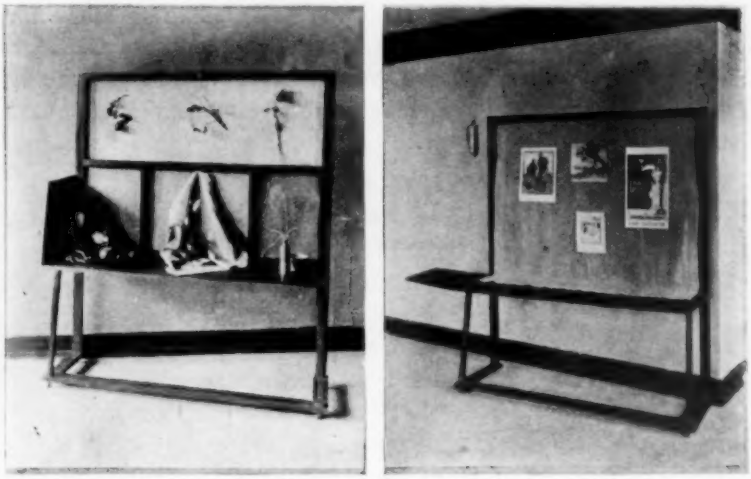


Plate III. The model stand in actual use.

Expense. The total cost of the stand was as follows:—

Poplar	$1.69
1-2″ dowels	.10
Monks cloth	.88
Casters	.20
Brass tacks	.05
Brass rings	.05
1 3-4″ screws	.04
Total,	$3.01

Our stain was given us and we happened to have small screw-eyes which we sprung open and used for hooks.

The stand is raised enough from the floor by the casters to allow our toes to slide under the base without "stubbing,"

and the supports under the shelf were slanted in to allow for our knees when moving about it. It does all that we ask of it, and if the benefit, pleasure, and satisfaction derived in the making of it count for anything, its value cannot be measured in dollars and cents.

ROYAL B. FARNUM

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THE AGASSIZ SCHOOL EXPERIMENT

THE question now asked by thousands of conscientious superintendents, principals, and teachers is this: "What should be our attitude toward the present insistent demand for industrial training?"

Circumstances will govern our answers to this question, and eventually many modifications will be made at different points in our present school systems, but that it is a problem to which the schools should give immediate and sympathetic attention there can be no reasonable doubt. The schools should do this work because the continued confidence of the public depends upon it, they should do it because they will receive better support from organized labor, they should do it because all education is one and the trained educator knows more about educating children than does the manufacturer, they should do it because they can do it better than any other organization.

Two facts of common concern are evident—

First: Elementary industrial training of a general character must be provided if the rank and file of industrial workers are to receive any benefit whatever.

Second: Any adequate scheme of industrial training must take full account of the industrial value of our so-called "academic" or "cultural" education and of the educational value of industry.

It therefore seems desirable to so modify our elementary school curriculum that it will lead some of the pupils naturally into vocational schools or classes without, however, hazarding the chances of any for entrance to the high school.

The Boston School Committee decided, two years ago, to make an experiment with modifications of this nature, and selected the Agassiz School in which to try it. The experiment has attracted some attention and many teachers have sought information regarding the purpose of the classes, their organization, and the methods employed.

The aim of this article is to supply this information, as far as possible, by describing the work of one of these classes in such detail that it may serve as a starting point for similar experimentation elsewhere.

The purpose of the classes is best set forth by the brief statement of a few guiding principles.

Industrial education is, at bottom, one with general education. It is a matter of emphasis.

Any training is industrial training if it develops industrial efficiency and creates industrial interest.

The time to begin to create this industrial interest is at least two years before the majority of industrial workers leave school, or about twelve years of age.

The best way to create this interest and to develop efficiency is to have the pupils engage in productive labor. This can be done in the schools if they manufacture, in some quantity, a product which can be applied by the school department to its own uses. There is little doubt that much work in manufacturing school supplies and equipment can be done by the school children in a manner that is perfectly satisfactory as regards the finished product, and highly beneficial as regards the training of the children themselves.

It is the business of the schools to supply the demonstrated educational demands of life. There is practical agreement among manufacturers as to the characteristics which they desire in their youthful employes. They do not expect their boys to possess a high degree of skill, but they do want boys who are "handy" and adaptable. They want boys who have some appreciation of the value of time and know something of modern industrial methods, and who are capable of taking an interest in the successful prosecution of their work. They want boys

who can apply their knowledge of English and mathematics to the work in hand.

It is the purpose of the Agassiz School experiment to demonstrate the essential soundness of the above stated principles.

Organization. In response to a general invitation, the parents of fifty boys about to enter Grade VI, requested that their sons be admitted to the special "industrial class" to be opened at the beginning of the school year.

As a result a class was organized, in which five hours a week were devoted to manual work. In all other respects, the regular sixth grade course of the school was carried out. The "industrial" work was conducted in a manual training room by a special teacher, who received the boys in two sections of twenty-five each. Each section worked during a two-hour period on alternate school days, thus averaging five hours a week. It should be observed that by this arrangement the regular teacher had a small class for ten hours a week. This advantage more than compensated for the extra time given to manual work.

It was understood that the things made should be used by the city and preferably should be such as could be manufactured in considerable quantities.

Methods. The methods of work can be explained most clearly by giving a detailed description of the making of the first model.

Several hundred pasteboard boxes, 2 3-4″ x 2 3-4″ x 4″, are used by the School Department every year, and it was decided to make a supply of these boxes.

The boys had done the work in cardboard construction the previous year, and so understood how to make a box of such simple construction. Dimensioned sketches were worked out in class and each boy made one complete box.

An account was kept of the total amount of time consumed in producing the twenty-five boxes made by the class. Some computations, based on the commercial value of the boxes, were made which showed that this method of production would hardly pay the worker one cent a day.

Again, of the first twenty-five boxes, some were good and some were bad, and there was considerable variation in measurements. The cover of one box would not always fit another.

It was pointed out that all must be up to a standard to be commercially acceptable, and all must be essentially uniform and adequate for the use for which they were designed.

Furthermore, some boys had spoiled two or three pieces of cardboard in making a single box. The lesson was drawn that any manufacturer wasting one-half of his material would be obliged to go out of business.

In the light of the foregoing, it was decided that more effective methods should be devised. An analysis of the processes was made and it was found that the making of the box could be divided into seven different operations.

The boys were arranged in groups and each group performed one of these seven operations. There were the box cutters, cover cutters, stayers, pasters, fitters, gluers, and inspectors. Jigs or mechanical devices were made which secured greater accuracy and uniformity in the product.

A system of inspection and checking was introduced, which at once detected or prevented errors.

As a result, a lot of seven hundred boxes was made with an expenditure of time which showed an increase in efficiency of about four hundred per cent. The percentage of waste was less than one-half of one per cent., and each boy had contributed to the success of the undertaking, some more, and some less, according to ability, but all were represented.

When the team called to transfer the seven hundred boxes to the School Committee supply rooms, each boy had a sense of achievement which was indicative of subsequent effort on his part.

Practically all of the distinctive features of the entire year's work are illustrated by this single project. As the work progressed the pupils were led to originate plans, devise jigs, and put themselves into their work in other ways. They were given responsibility for their own work, and sometimes for the work of others, and finally learned one of the most important lessons of modern industry, that the success of all depends upon the success of each.

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THE UNBACKED BOOK

IN introducing an established Craft, such as bookbinding, into the classroom, the plain duty of the teacher is to present the Craft, or so much of it as may be found practical, in a thoroughly technical way.

The whole process of bookbinding calls for an equipment beyond the resources of an ordinary classroom, and while the gluing up, rounding, and backing, could not well be carried on outside the shop, the folding, cutting, and sewing of the book offer a large field for good training. Entirely omitting the process of backing, the sewn book may be put into boards in an accepted bindery method, the necessary omission being carefully explained to the pupil, that he may understand the relation of his work to the complete process. In taking these three steps—folding, sewing the book, and attaching the boards, according to established rules, a very satisfactory result may be obtained.

The book described in this article measures 5 1-2 by 7 1-2 inches, is a little over 1-2 an inch thick, and is sewn on dark blue leather bands, with heavy orange silk twist. The boards are 1-8 of an inch in thickness, covered with an attractive covering paper, and the pages are of heavy tinted paper. The bands upon which it is sewn, extending over the boards for an inch before being inserted and pasted against the inside, while ornamenting the back, leave it fully exposed.

It is impossible, in this brief description of a process, requiring a series of articles, to give minute directions for each step; much must be omitted. "Bookbinding" by Douglas Cockerel, will be of assistance to the teacher.*

Materials for the book are as follows:

Ten sheets heavy paper 8 x 12 3-4 inches. (Fold and cut large sheets to these dimensions with bone folder.)

*See paragraphs, Marking up, 98; Sewing, 103; Kettle stitch, 105; Catching up stitches at back, 111; Boards, 131; Slips attached, 181-183.

Two sheets of lighter decorated paper 8 x 13 1-4 inches. (To line boards, called "paste-down paper)".
Two pieces tar board No. 5. 6 1-2 x 8 1-4 inches. (These should not be cut until book is sewn, and must extend 1-4 inch beyond pages on three sides.)
Four strips of strong leather 5 inches long by 1-2 inch wide. (Cut evenly, and tint to match color scheme.)
One spool strong twist.
Two pieces covering paper or book linen, 1-2 inch larger on all sides than the boards.
One needle (large enough to carry silk easily).
Smooth flour paste, large brush.

Collect the ten prepared sheets of paper and "knock up head" by holding the paper lightly at edges and tapping the head of sheets upon the working board (which must be level) until all are even. Lay carefully at upper left-hand corner of board. Take each sheet and fold evenly down center, creasing thoroughly with bone folder. (This creasing must be well done as it must substitute for press.)

End Papers. The end papers form an important part of the book. These include three sheets for fly-leaf, title-page, and the "paste-down paper" which lines the board. The end papers serve to fill in the unavoidable gap that occurs in all books between the boards and the first section, which would of course be more apparent in the unglued book were it not for the zig-zag fold in the paper described below. The decoration of these papers and the designing of the title-page make an interesting subject for the drawing class. Stenciled end papers are especially attractive.

To make an end paper which will allow for the "drag of the board" when the cover is open, take the unfolded sheet of paper, measuring 13 1-4 inches, 1-2 inch larger than the other folded sheets; fold and lay it with edges toward the left and point off with dividers 1-4 inch from back of fold at top and bottom.

Now fold the top sheet back toward the right, creasing at these marks; fold the under sheet the reverse way, and crease carefully with folder, leaving a V-shaped opening at the back. Place a double sheet inside of this, below the V-shaped fold. The upper sheet may be decorated, and pasted back against the board. Make two sets of end papers, for front and back of book. Place in press.

Figure 1. The sewing frame and the tools of the bookbinder.

Sewing. When all the pages are folded, collect into sections for sewing, slipping one double sheet inside another, making an eight-page section of four single sheets. (If thin paper is used, four double sheets should form a section instead of two, making sixteen pages.) Now "knock up" each section at head and back until perfectly even. If unevenness does occur it must be at the lower edge of the sheets. When all have been collated, place under

press, with thin sheets of tin (obtainable in any hardware store) covered with paper between every third section.

The important points in this process are: the tightly stretched upright bands; the sections (accurately marked for sewing) laid horizontally to the bands; the sewing thread pulled tightly and horizontally at the end of each section; the closely

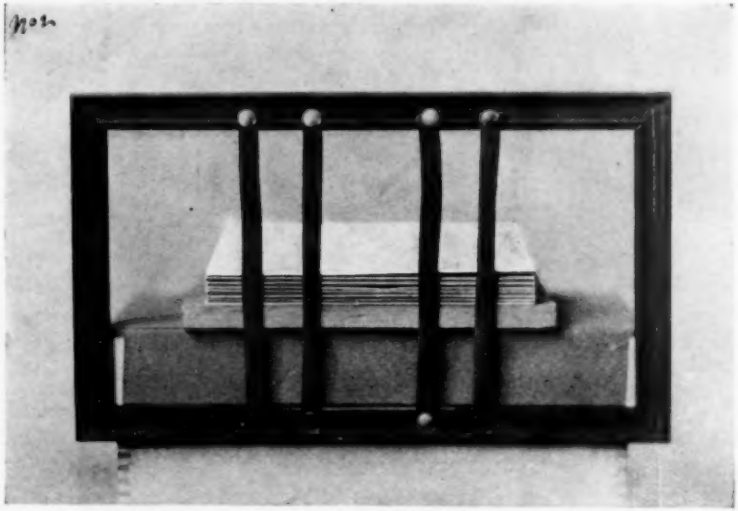
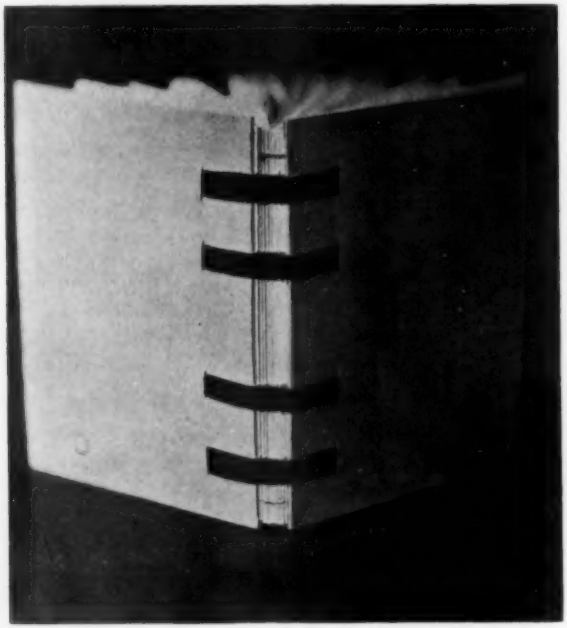


Figure 2. The rough substitute for the sewing frame. A picture frame nailed on a box.

drawn "Kettle Stitch" (holding the head and tail of book to the same thickness as the portions sewn on the bands).

This of course cannot be accomplished without the aid of the sewing frame. The regular frame, indispensable in every hand bindery, is here shown, Fig. 1; also the rough substitute for the sewing frame, made by nailing a picture frame on a box, Fig. 2. An adequate frame between these two extremes can,

however, easily be made by any boy or girl, by taking an inch thick board, large enough to hold the book, and three strips of wood, two nailed upright at the ends of the board and one horizontally across the uprights. The leather bands upon which



The unbacked book. Carefully selected materials and colors and careful workmanship make this a most attractive binding.

this book is to be sewn are stretched from the board to the horizontal bar, and fastened with thumb tacks, and the idea of the fixed vertical band, against which the book sections are to be firmly sewn, will be clearly demonstrated.

The "marking up" for sewing is of great importance, the greatest accuracy being necessary, as, if carelessly marked, the book will be ruined beyond repair in the sewing.

Take the book from the press, "knock up" and lay carefully, with back at the edge of the marking board, place tri-square against the back of the book, pointing down and bring back of section closely up to the blade. Now mark with sharp pencil as follows: For first leather band one inch from head of book; for second band, two and one-half inches; for third band, five inches; for fourth band, six and one-half inches.

Repeat lines across back, one-half inch below these marks, from top to bottom of back. This gives the spaces in which the leather bands will lie, and points at which the needle must pass in and out. Now mark for "Kettle Stitch" by drawing a line across the back 3-8 of an inch from each end. Saw in "Kettle Stitch" mark with fine file or hand-saw, or make deep groove into which the stitch may be drawn. Be sure all measurements are accurate and lines running straight across the back. Lay upon sewing frame, and adjust the bands with thumb tacks corresponding with marks on the back of the book. Now take up the book and adding the end papers "knock up" at head and back, and lay behind sewing frame with fore-edge toward the sewer, and first end-paper uppermost.

Take the end paper in the left hand, and lay it with the fold against the bands. This brings the front sheet of the end paper down, and the sheet through which the first sewing is to pass, up. Slip the left hand in the fold, where the sewing is to be, and with the right hand pass a threaded needle through the "Kettle Stitch" (marked, but not sawn in the end paper), grasp the needle with the left hand and pass it out through the back at the right side of the first upright band exactly through the pencil mark. Pull tight, leaving the end of the thread two inches

out at the "Kettle Stitch." The left hand must always remain in section, ready to receive and return the needle. Now insert the needle close against the left side of the band, receive in the left hand, carry down to the next band, push out at the right of it, and return into section at the left, receiving in the left hand, and so continue through the entire section, coming out at the lower "Kettle Stitch"; draw thread horizontally and tightly. Add the second section, pass the needle into the lower "Kettle Stitch" and sew in and out as before, sewing through two or four sheets at a time, according to the size of the section. When the "Kettle Stitch" at the head is reached, pull the thread tightly and tie the loose end, drawing it into section. Add the third section, and sew to the lower "Kettle Stitch," and bringing needle out, pass it between the first and second sections with blanket stitch loop; pull tightly into the groove made by file or saw. This loop makes the "Kettle Stitch" and is repeated at the head and tail of each section, always catching up the "Kettle Stitch" of the preceding section, thus forming a continuous chain through the saw cut, which keeps the ends of the book from spreading.

To tighten stitches, and ornament bands at back, at every fourth row upon coming out at the right of the band, slip needle down under the three preceding stitches, and draw tight with loop (see cut) before passing into the section at left of the band. Make double button hole at the last "Kettle Stitch" and draw into the book. This will leave end papers at front and back of book with V-shaped fold unsewn and ready to attach to the boards.

Covers. Cover the boards neatly with linen or covering paper, lay upon sewn book, and measure for insertion of "slips" or ends of bands upon which the book is sewn. With sharp knife cut four slits in the boards, the exact width of bands, one inch

from back, insert slips, pared thin, and, pulling tightly, fit covers with great care, and attach slips on inside of boards with paste. A little paste may be put on the underside of the bands on the outside of the book before they are pulled through the slits in the board. Insert the covered tins and put in press. When all is dry, the decorated end paper is pasted smoothly against the board. Before pressing, a sheet of blotting paper is placed between each board and the book.

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New York

ANNOTATED OUTLINES

DECEMBER

CONSTRUCTIVE Design and structural drawing continue to occupy our attention this month. The objects made by the children should be of interest to them, related to the season, and of such character in each grade as the powers of the children may determine. A bright class, brilliant pupils in the class, should be given work commensurate to ability, though it be work outlined for the next grade above. Let the spirit of the season pervade all we do. Let us make gifts; make them as well as we can; make them as beautiful as our limited resources will allow.

PRIMARY

Aim: To lead the children to become familiar with geometric elements and terms, to attain skill in the use of pencil, ruler, scissors and knife, and to produce more attractive primary school work.

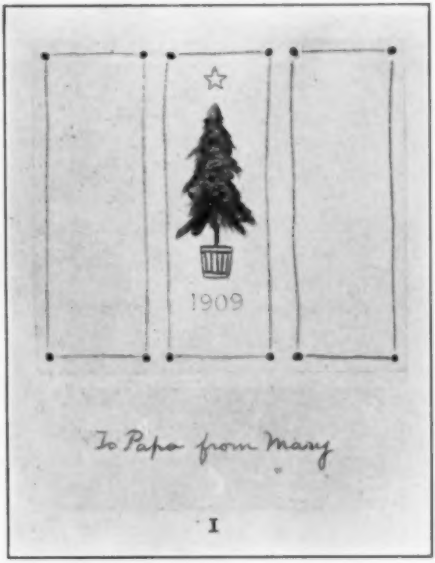
FIRST YEAR. Make Christmas greetings, using paper and colored pencils.

These must be extremely simple, such, for example, as the following: Figure 1: Take a sheet of paper 6 x 9 and fold it to make halves and then quarters. Cut off one quarter. With a red pencil make holly berries in the corners of each page. With a green pencil draw the margin lines. Cut from paper, or draw with the green pencil, the Christmas tree, standing in its red tub. Print the year below. If the work is well done the teacher will add a gold star above as a reward of merit. On the remaining slip write the greeting card to be folded inside the covers.

SECOND YEAR. (U) Make Christmas toys, using paper and colored pencils or water color.

A shop window, Fig. 2, is a good subject for all to work out together. The toys in this window were made by little folk in Dover, Mass., but the window

was made and arranged to illustrate this outline. Let each pupil draw any toy he likes, color it, and cut it out. Let each make several toys, or make an entire window. Paste strips of manila paper on a sheet of black cardboard, and on these, as shelves, arrange the toys. The window frame is made of white paper, and added last, over all. Christmas decorations suggested by the children, add to the festive appearance of the shop window.

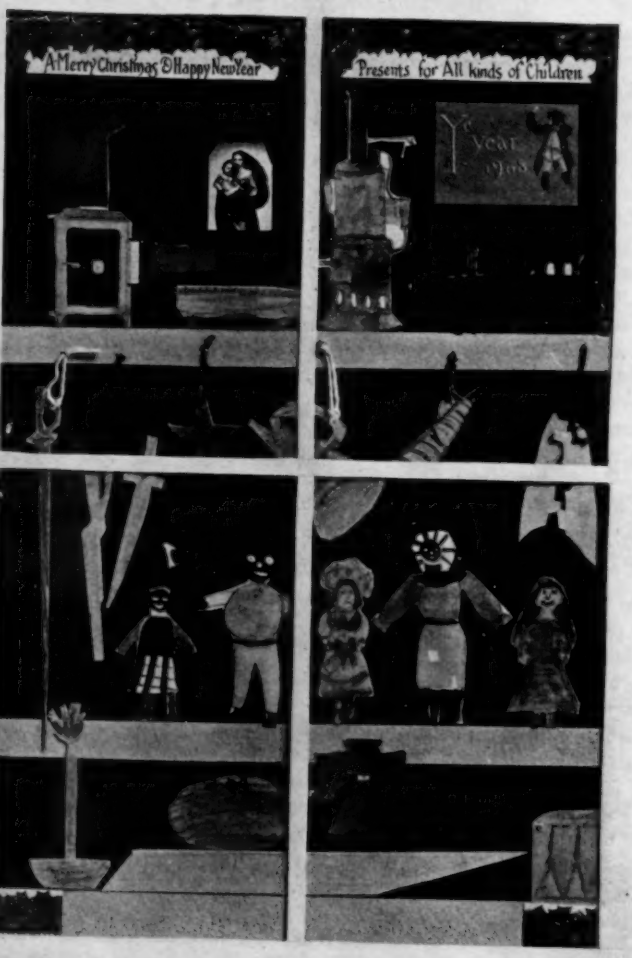


THIRD YEAR. Make a Christmas Booklet, using any available and appropriate material.

The silhouettes given herewith (Fig. 4) are from a portfolio of plates illustrating the Annual Visit of St. Nicholas by Professor Moore. They were suggested by the lines, "When all through the house," "Not even a mouse," "The stockings were hung by the chimney with care," "The moon on the crest of the newfallen snow." The silhouettes were cut from dark gray paper, and the "scraps" were pasted on sheets of white paper to produce the effect of a white silhouette within a white frame. Of course the line illustrated might have been written below the silhouette, but the children preferred to let people guess, "for everybody ought to know that poem well enough to know how it looks without being told." The portfolio in this case was very simple, somewhat like that given by Miss Derby in the last May number.

GRAMMAR

Aim: To develop intelligence, taste and skill in handicraft, the sort of handicraft appropriate to school life.

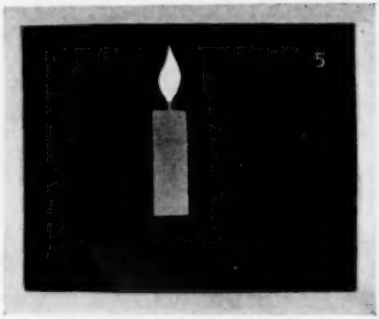

A Merry Christmas & Happy New Year
Presents for All kinds of Children

II

Schools differ so greatly in the variety and amount of material available for handicraft that the outlining of work in tooled leather, metal, embroidery, etc., would make this schedule impossible to the majority. Problems involving such materials are given in The Workshop. Here the materials required are for the most part only paper and wood, such as wideawake children can always procure.

FOURTH YEAR. (U) 1. Make a Christmas greeting, and an envelope in which to keep it, using symbolic elements.

Figure 4

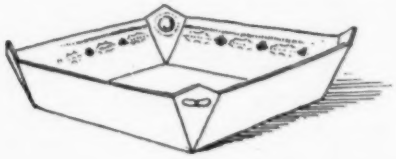


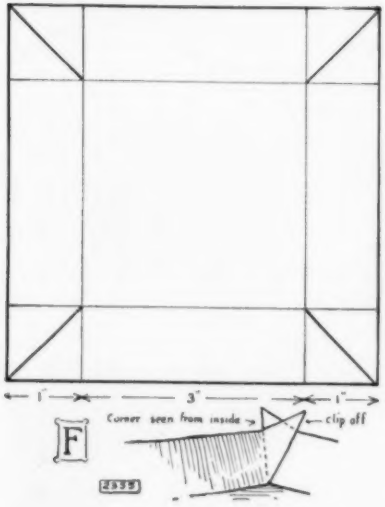
These greetings may be in the form of cards, booklets, pictures, or other objects, such as have been outlined here in previous years.* A new form of decorative paper cutting is shown in the initial beginning this Outline, and in Figure 5.

*See back numbers Book, November, December; also Christmas Packet, Davis Press.

The papers used are carefully selected for their hues and values that the result may be pleasing. Good subjects for work of this kind are the following: The star above a symbol of the Little Town; a Christmas tree; a conventional spray of holly or mistletoe; monograms, and other appropriate reminders of the great festival, and of Him who makes it great.

2. **Make a candy tray of paper, cardboard, or sheet metal.**





The simplest possible form is shown at F. If paper or card is used the corners may be pasted, or clipped and held together by means of a brass fastener as shown in the perspective sketch. Decorations may be added on the sides, as suggested. If tin or sheet brass is used the folding of the corners alone, if carefully done, will be sufficient to hold the tray together. They may be trimmed and riveted.

FIFTH YEAR. 1. Make a Christmas booklet, with a decorated cover.

Suggestive illustrations are given in the plate on page 249. These are as follows, in order: A Christmas Greeting, Charles Smart, III, Braintree, Mass. The Christmas Story, Librado Net, IV, Ponce, P. R. Copy of a Christmas Carol by James R. Lowell, Maud Cresswell, VIII, E. Braintree, Mass. An Alphabet of Quotations of New Year Maxims,

A
MERRY
CHRISTMAS
CHRISTMAS
CHRISTMAS 1908
FOR
1908

William Geary, VI, Westerly, R. I., and another by Malia Bernasioni, VI, Westerly, R. I. Whatever is attempted let it be something in which the children are especially interested, and let it be done well—good spacing, good drawing, good coloring, under the thought expressed in the motto of The School Arts Guild.

2. (U) Make a toy as a Christmas gift for somebody.

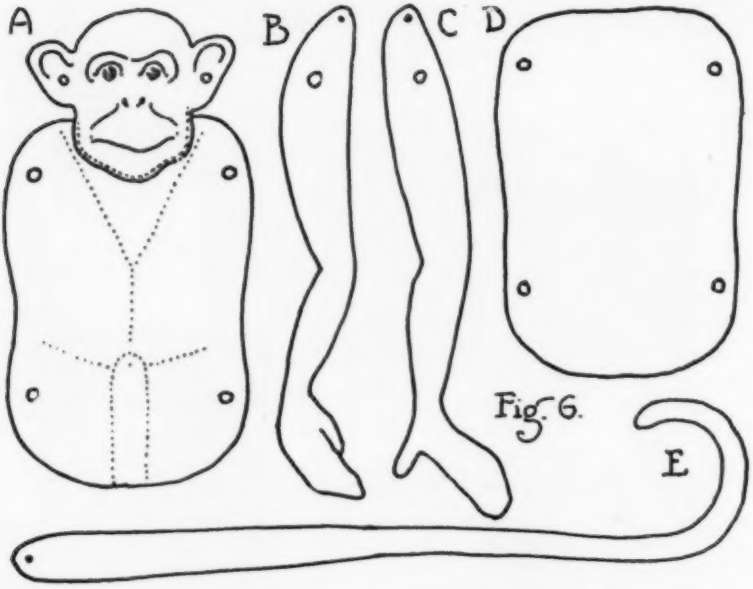
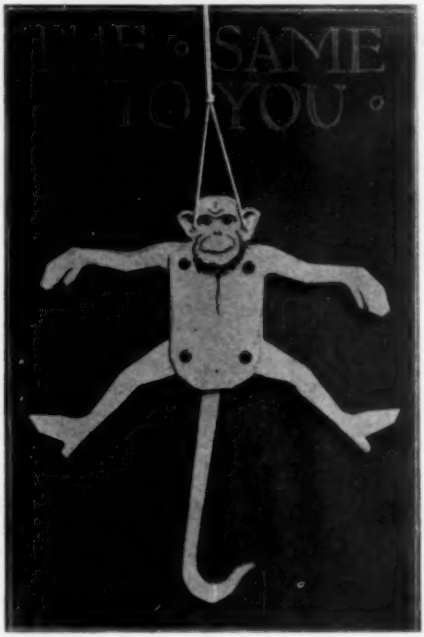


Fig. 6.

The toy may be anything within the powers of the class, or of the individual pupil (for all need not make the same). The toy selected for this outline is a jumping-jack,—a monkey. It may be made of stiff cardboard or of thin wood. The essential parts are shown at Figure 6. Cut duplicates of B and C. The dotted lines in A, suggest the stringing-up of the parts, when all are in normal position. The full and dotted lines side by side indicate drawing rather

than cutting. The jumping-jack photographed for Figure 7, was made of cardboard and put together with brass fasteners.



SIXTH YEAR. 1. Make a Christmas cornucopia with appropriate decoration in color.

A novel and pretty form is shown in Figure 8. It is made from a sheet of paper 9 x 12. Fold on a; fold over the folded edge, f, so that it "aims for the corner" as shown in the diagram, c; fold this part over again, on the line f, as shown in diagram d; cut off the corners of the sheet, d, g. Open the flat. On the creases radiating from e, mark off points 1, 2, 3, 4, 5, seven inches from e. Connect these points by straight lines as shown by the dotted lines. Draw the semi-circles, or other curves in place of them, to make the ornamental fringe around the top. Cut out the flat on the heavy lines.* Paste o and o together; fold over h and h and paste them securely. The ornament painted on in watercolor, as indicated in the perspective sketch, is based on the mistletoe.

2. Make a toy as a Christmas gift for somebody.

The boys of this grade might be interested to make a toy pistol such as that described at Figure 9. The girls might try a bit of needlework, one of the articles described in "The Traveler's Outfit" by "Sister May," in The School

*The little triangular pieces forming the corners below h and h, would better be left on until the cornucopia is pasted.

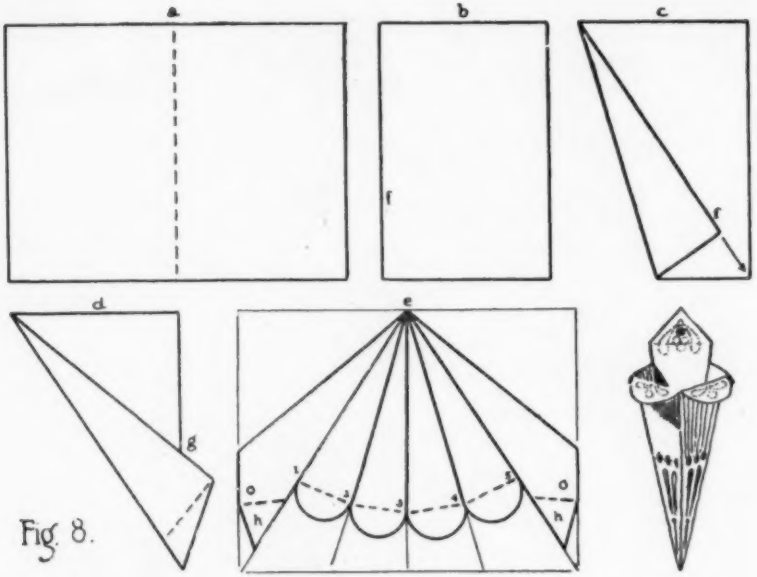


Fig. 8.

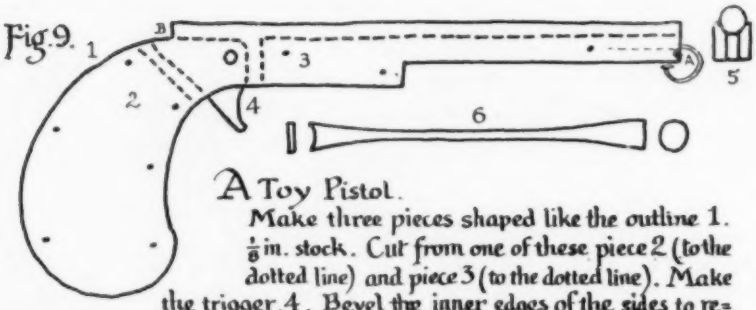


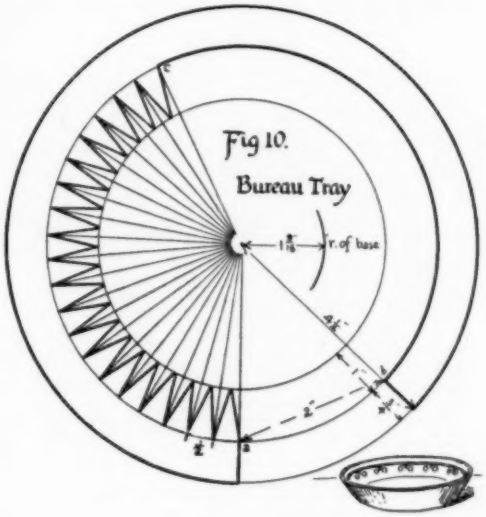
Fig. 9.

A Toy Pistol.

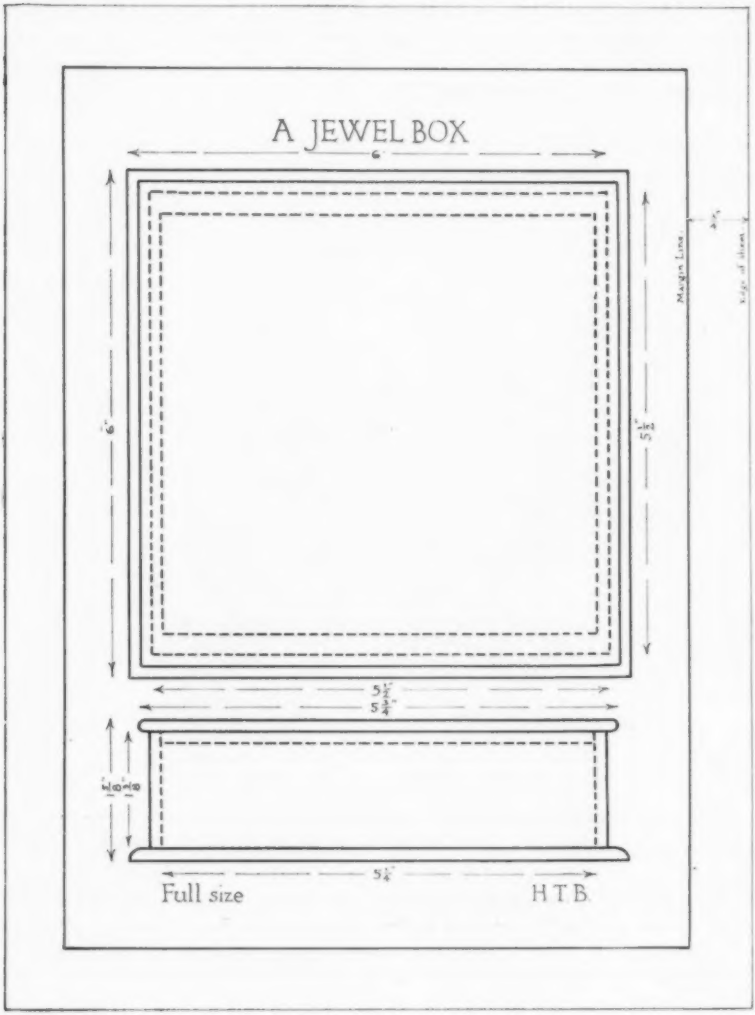
Make three pieces shaped like the outline 1. $\frac{1}{8}$ in. stock. Cut from one of these piece 2 (to the dotted line) and piece 3 (to the dotted line). Make the trigger, 4. Bevel the inner edges of the sides to receive the bolt, 6, as shown at 5. Insert a bent pin, A, to receive the rubber band. Adjust from A to B. Fire! (Dots indicate tacks).

Arts Book last year. Possibly it may be quite enough in this and the following grades, for the girls to work out the problems numbered 1, and for the boys to work out the problems numbered 2. But some girls like to do boy problems! And bright pupils can work out both.

SEVENTH YEAR. (U) 1. Make a bureau tray of stout paper, with appropriate decoration in color.



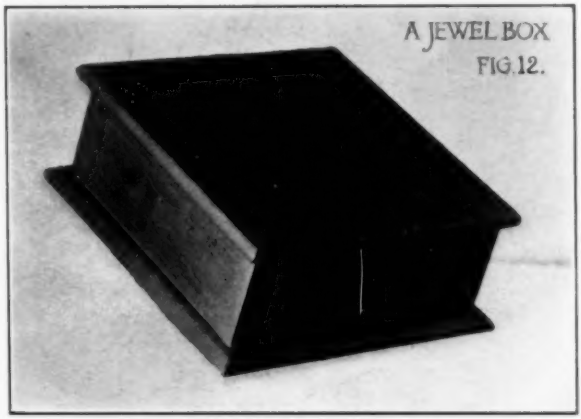
The flat of a serviceable tray of pleasing shape is given in Figure 10. It may be made of good drawing paper, or of thin oak tag. Draw the outside circle, 9 inches in diameter; draw the circle for the base of the side (3-4 inch high), and for the points of the laps. On the second circle, beginning at a point a, set off twenty 1-2 inch spaces to locate the laps. From a, measure two inches across to b. Cut on the heavy lines. Bend the laps as nearly as possible on the light circle. Bend the flat until the point a comes to c. The rim will then pass around inside until the point b comes also to c, making the


A JEWEL BOX
6"
6"
5 1/2"
5 1/2"
5 3/4"
1 1/2"
1 1/2"
5 1/4"
Full size
H.T.B.

sides of the tray double thick. Cut from paper two circles 3 1-8 inches in diameter. Paste one on inside, and one outside to form the bottom of the tray. Decorate the tray with a single band of color on the outside (or none at all), and with a simple border on the rim, inside.

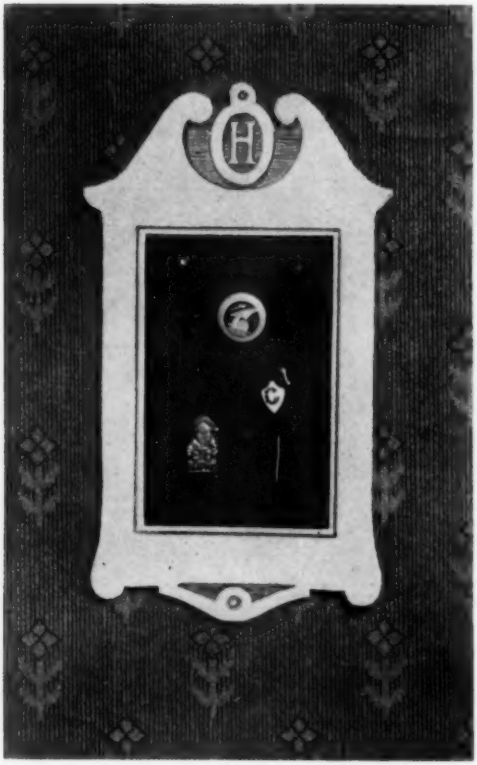
2. **Make some object useful in the home, involving two views in the working drawing.**

A Jewel Box, such as that shown in the drawing, Fig. 11, and in perspective, Fig. 12, is suggested. This can be made from eighth-inch stock, except



the two ends, which for convenience in nailing and for strength, should be of quarter-inch stock. The cover and sides of the box may be ornamented as indicated in Figure 12. If this is too difficult for the grade, or requires more stock than is available, the pupils might try the wall pin shield, Fig. 13. This involves the making of a frame of thin wood; the making of a pad of wood covered with cloth; and of a back to hold the two together. The pad may be fastened into the frame by a back of cloth firmly glued into place. Two screws hold the pad firmly to the wall at the desired height. This problem offers opportunity for original design both in form and in color. The object should look well upon its wall.

EIGHTH YEAR. 1. Make some object, suitable for a gift, involving both structural and decorative design.

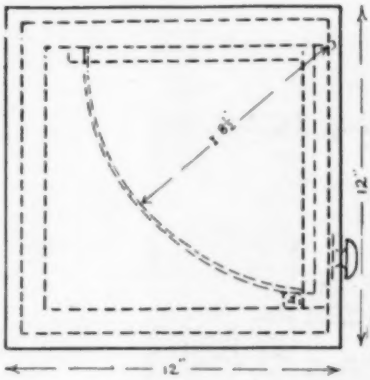


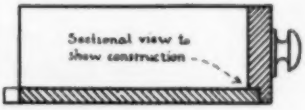
A Triptych, Fig. 14, is suggested. This problem has a history. Triptychs have been made for many hundreds of years. Some are famous. Look them up. The frames may be simple or ornate. They offer opportunities for the

use of the coping saw, the wood-carving tool, color, pictorial art, pen-craft,—in fact a triptych is the open–door to all the crafts. It should be made of quarter-inch stock, and the doors or wings hung with little metal hinges; but that shown in the illustration is made from cardboard. The fine point in the design is to achieve something as beautiful and as complete in appearance when open as when closed. Compare Figures 14 and 15. Usually three pictures occupy the three rectangular spaces but a poem or other quotation may occupy the wings.

2. Make some object useful in the home, involving drawing to scale, and a sectional view.

A Blacking Stand is suggested. Here is a stand, Figs. 16 and 17, which is substantial, of the right height, which may be opened with one hand after the foot is in place, holds the blacking at a reachable level, and may be made by anybody who can get an old packing box, and who can use the simple wood-working tools. Two boys made the stand here photographed, from rough stock, in a single evening, less than three hours from start to finish. The stand photographed varies slightly from the working drawing, but not essentially. In making the swing drawer be sure to have the hinge the center from which to lay out the quadrant. You will have to nail the stop, a, in place before hanging the drawer. The hinge must go on last. The stand may be finished in the natural wood, stained, or painted. Naturally such an object requires no ornament except good proportions and good lines. The piece cut from the sides need not be severely triangular in shape. The hinge might be ornamental, slightly; and the knob might correspond.

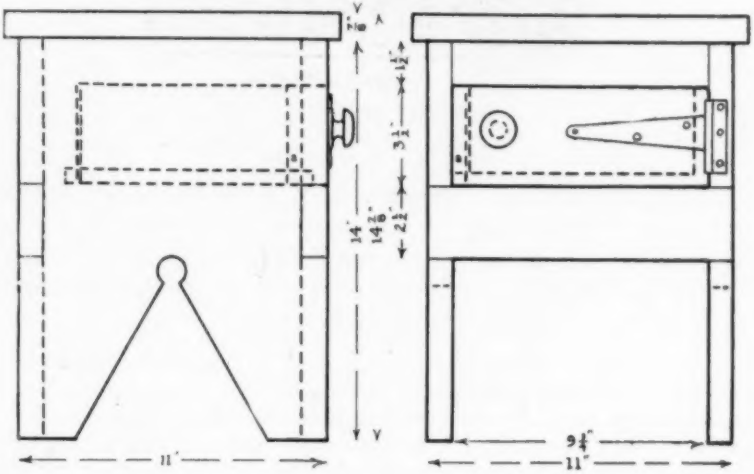




Blacking Stand

⅞" Stock except parts of drawer.

1 pc. 12" x 12"
2 pcs. 11" x 14"
1 pc. 7½" x 11"
1 pc. 1½" x 9¼"
1 pc. 3½" x 9¼"
1 pc. 2½" x 11"
1 T hinge (3")
1 pc. zinc or tin, 3½" x 14".
1 Knob.
1 pc. 9" x 9", 1 pc. 3" x 8½" (½")



The top, subject to soiling, should be left plain, that itmay be cleaned easily and thoroughly.

H. T. B.

HIGH SCHOOL

FREEHAND DIVISION

The program for December may advisedly be along two lines, the first a study of perspective principles applied to objects seen in landscape surroundings, the second an application of class co-operation or communal work to the Christmas decoration of the schoolroom or assembly hall.

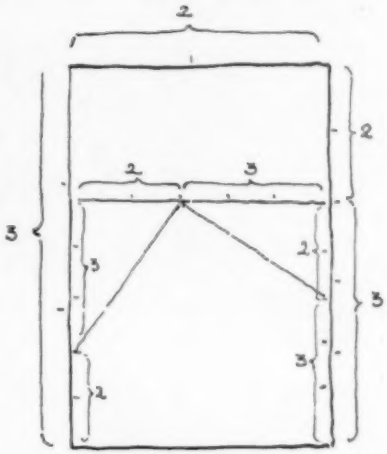
PERSPECTIVE PRINCIPLES. The pupils in the grammar grades are supposed to be thoroughly familiar with perspective principles. It would seem almost a waste of time to review them. Experience proves, however, that it is not time wasted and that a new view point and different applications of old principles excites interest and fastens knowledge.

Our consideration of landscape in last month's program will help us in starting this month's perspective work, for most important ideas of perspective

may be gained out of doors. Review the idea and principle of the horizon level as being always at the height of one's eye. Clinch the difference between the true sea level or flat plain horizon and a wooded or hilly sky-line. Try at the blackboard a dictation exercise, somewhat as follows, the class working it out individually. The subject shall be the familiar one of a retreating street or railroad track. The underlying principle of spacing in this lesson shall be the ratio of two parts to three. Any space whatever that needs subdivision shall be thus treated and not cut at random.

The size of the sheet itself is 2 : 3 parts. Divide AB into 5 parts; the margin shall be one part on each side, the picture 3 parts. This size margin may be carried around of uniform size, or the bottom may be increased one-third over the top margin.

Locate the horizon by dividing the area inside the frame into five parts, of which two parts are land, and three sky, or vice versa. If a very high or low horizon is desired, re-divide the upper or lower two-fifths, according to the same principle. Situate in the same way the front end of each side of the road.

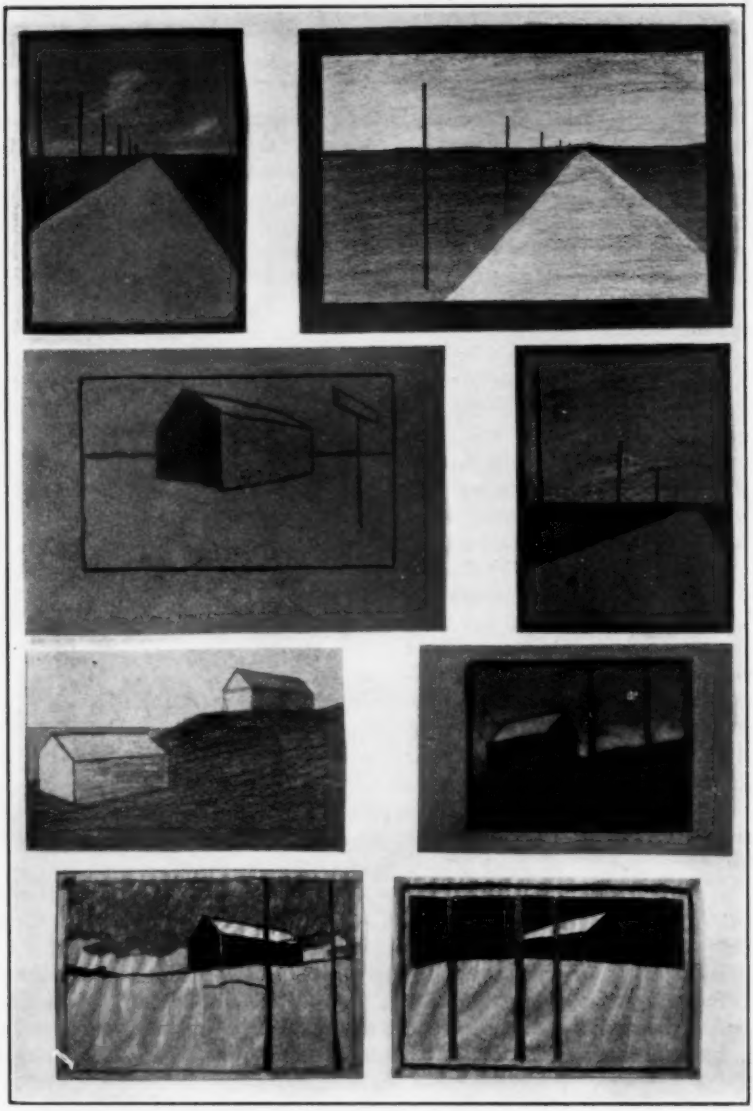


Possible method of plotting a landscape problem . . .

A consistent adherence to this method of spacing will allow of as many arrangements as there are pupils, and consistent variety in each drawing.

The telegraph poles (see plate page 262) are best located at the side showing the greater space, their bases and tops limited by guide lines converging at the vanishing point.

In spacing a row of retreating objects such as these poles, the customary method of random guesswork should, I think, be replaced by the following logical system which, by repeated experiment, I have found to give a satisfactory appearance. Equal distances, retreating in perspective, diminish at a constant ratio. If we can make our telegraph poles here follow the same principle our results will be convincing in appearance. For example, suppose



Examples of the application of perspective principles in landscape problems, by high school pupils.

the position of the second pole seems to be half way between the first pole and the vanishing point, then the third pole will be similarly half way from the second pole to the vanishing point. Each succeeding pole will also be one-half the distance from the previous pole to the vanishing point.

If a more ambitious person desires to work this out on the idea of a third, a quarter or an eighth of the distance from the last pole to the centre of vision each time, the result will be equally good but showing a closer setting of the poles.

The finish of this sketch admits of a wide range of treatment in a number of materials. The application here of landscape elements studied in last month's outline will bring happy results. The horizon may be somewhat varied; the road may be enlivened by some irregularities of stones or shrubbery, and the able student can substitute for the bare poles a row of fall trees. The perspective elements, however, should not be swallowed up in landscape detail. A cloud or two does no harm and may also show the diminution of size of these forms as they approach the horizon.

The problem of the road may be followed by one involving two rectangular solids in angular perspective, one above and the other below the horizon. Their vanishing points should be some distance outside the frame, and their location inside the frame should be planned with an idea of good space composition in mind, the ratios of the previous drawing being here applicable.

The addition of triangular prisms above these solids changes them into houses, which become still more satisfactory in appearance when a hill is suggested with a distant horizon. The addition of trees or other simple accessories is helpful to the composition if based on the two-to-three principle.

COMMUNAL DECORATION. The holiday season invites many attempts at decoration with equal chances for original experiments individually or as a class. The latter method is less usual and worth trying.

Whether the choice of a room is the auditorium of the school or the smaller classroom, the idea of the decoration must at first be structural. The decorations should be concentrated at a few points and not scattered. Vertical or horizontal lines of doors and windows or other vital features should be the starting points. A general sketch of the wall spaces to be treated could be put on the board and original schemes for treatment sketched by the pupils. Either the teacher's own scheme or the best one of those done by the pupils should be then followed by the class or classes, each pupil doing over and over a definite part of the problem. The assembling and putting up of all these details when finally executed completes the work.

1. Group of holly leaves for class enlargement for repetition in the decoration of the room. 2. A design for a decoration based on the holly motif. 3. An example of a decorative monogram cut from paper and colored. In this particular case it was made for the Hudson-Fulton celebration. 4. A group of laurel leaves cut from paper and colored. Enlarged by a pupil from a blackboard sketch. Three hundred of these were made last year for the decoration of a high school room in New York City.

In doing decorating of this kind the size of work required is deceptive. It usually has to be much larger than one would suppose. A trial of some sketch forms in the actual space to be decorated will give one the necessary scale.

Christmas decorations involve no new devices or forms but may employ new methods. Each boy and girl, for example, may make several leaves like the holly or the laurel (see illustration herewith). In order to insure uniformity have them copied from the board by a system of squares. Color brilliantly with water color or crayon, outline with black, or gilt paint if procurable, and assemble these in long lines, bands, wreaths and festoons. The size of these leaves may vary from five to twelve inches in length. In assembling them a backing of cardboard or wooden strips may be used, together with necessary liquid glue and small tacks. Monograms, heraldic devices and emblematic forms appropriate to the time may be cut in large silhouettes by the abler pupils, colored in flat tones and mounted on shields or escutcheons, or surrounded by wreaths of the leaves just described.

An evening gathering may be made doubly attractive by rice paper shields or shades for the electric lights on which appropriate flat tone designs with broad black outlines have been drawn.

Former numbers of The School Arts Book furnish plenty of material for holiday motives, which when enlarged by squaring-up and produced in quantities by several classes will decorate a considerable area. The caution cannot be too strongly forced home, to mass one's decorations along the constructive features and not dissipate their force by small and scattered effects.

HAROLD HAVEN BROWN
Stuyvesant High School, New York City

MECHANICAL DIVISION

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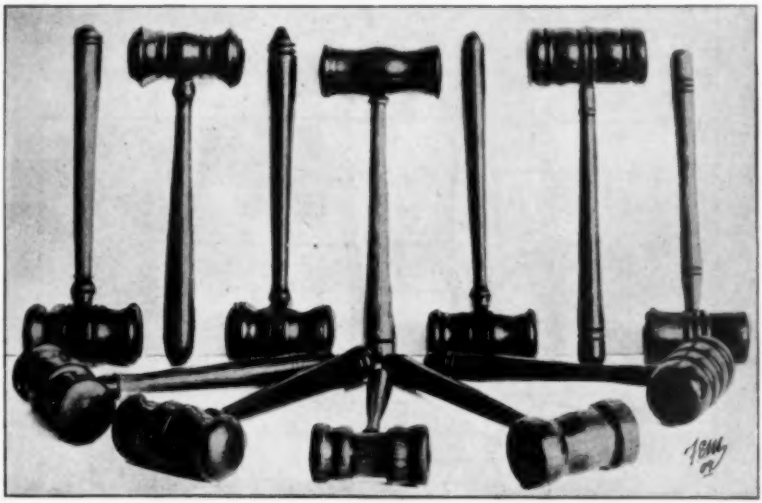
The next consideration to be given to the cylindrical form should be the development of its surfaces, the calculations for



the area of these surfaces and its cubical contents. This brings some mathematics into the drawing course and emphasis may be given to the fact that mechanical drawing and mathematics are closely related.

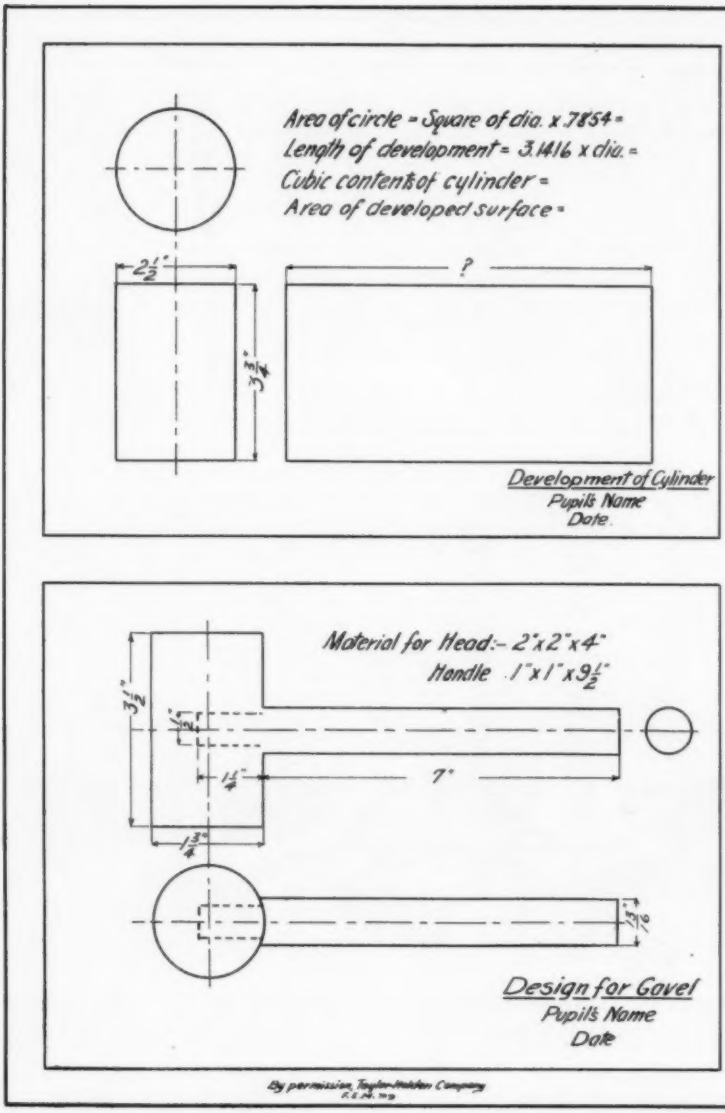


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Plate IV. Working drawing of a cylinder and its development. Page 266. Results of calculations should be neatly lettered on the drawing plate.

Plate V. A design plate for a gavel or small mallett to be made in the shop. The drawing, page 266, gives the largest cylindrical forms to be made from the square material specified. The plate on page 265 illustrates results obtained from one division of a first-year class.

Plate VI. Make a working drawing of two views and a perspective sketch of a cylindrical ring, outside diameter 4 1-2 inches, inside diameter 2 1-2 inches. A section through the ring is one inch square. This is a type form for several good examples in design such as the picture frame and napkin ring, although the proportions of each are widely different.

FRANK E. MATHEWSON

Technical High School

Cleveland, Ohio

THE WORKSHOP

WOODWORKING

THIS month's plan was suggested by a mounted elephant head in the museum in New York and has been worked out successfully by some of our eighth grade boys. It is an excellent problem in accurate sawing and boring, with some slight work that may be done with chisel or file.

ELEPHANT TIE HOLDER

Some previous practice with back-saw, brace and bit, knife and chisel, is necessary to successfully construct this piece. It requires, of course, sawing true on a line. Although called a Tie Holder it may be used as a hanger for towels as well. Any wood may be used such as pine, poplar, bass, gum, or chestnut and oak, the last two allowing the best finish.

The material for the back piece or ears should be 1-2″ or 3-4″ thick and for the head and stick, 7-8″.

Saw out Figure 1 square to dimensions. If the cut is true no planing will be necessary. Next, rule in the construction lines very carefully on both sides of the wood. Before any wood is cut away bore the holes indicated in solid black, Fig. 1, Fig. 4. The larger hole, which is for the stick, is to be bored with a 3-4″ auger bit and must be very straight. Bore partly through from one side and finish from the other, both to avoid splitting and to insure accuracy.

During this process the wood should be held in the vise horizontally by its longer edges thus compressing the fibre and preventing splitting.

For the smaller holes a 3-16″ drill bit is large enough. The eye hole is bored only a little distance in from either side.

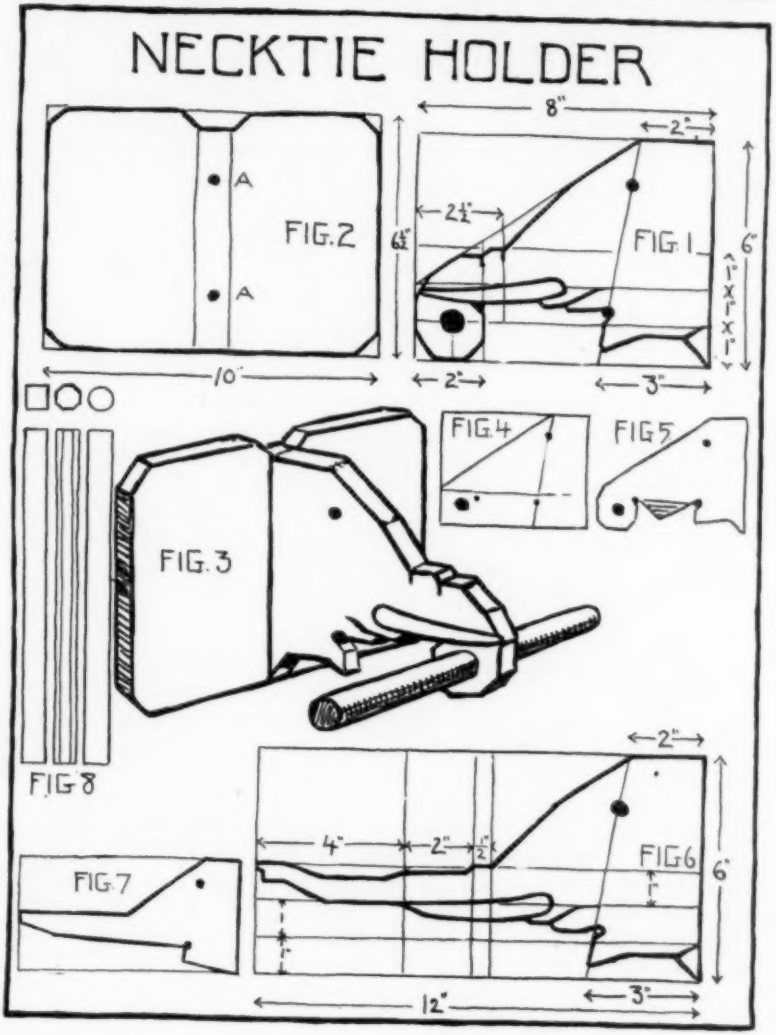
After these holes are bored successfully the wood may be cut away to the shape shown in Figure 5 with the back-saw. The chisel is used to cut away the wood indicated by short lines, and the finer cuts made with that tool. Tusk lines and wrinkles are carved either with the knife or a veining tool.

Sandpapering surfaces will reduce the extreme sharpness of edges.

Figure 2 is so simple in form as to need no special mention. The two pieces are fastened together by 1 3-4″ flat head screws at AA, Fig. 2. Hang the rack either by holes through the back piece or by screw eyes set in its upper edge.

In Figure 8 is shown the process of reducing a square stick to a cylinder. This can be done with the plane, knife or file and sandpaper.

It is easier if a 3-4″ dowel rod can be obtained. This bar may be 9″ or 10″ long. It must be worked down with file and sandpaper until it will drive


NECKTIE HOLDER
8"
2"
2½"
FIG. 1
6"
1" x 1" x 1"
6½"
A
A
FIG. 2
10"
2"
3"
FIG. 4
FIG. 5
FIG. 3
FIG. 8
2"
4"
2"
½"
FIG. 6
6"
FIG. 7
12"
3"

into the hole easily as any forcing is liable to split the trunk. A touch of glue will hold the two in place.

A variant of the head design is shown in Figures 6 and 7. This is easier to make but not as interesting in form. In this last design the ties are hung over the outstretched trunk.

Stain the whole brown or black and after this is dry, paint in tusks with varnish white.

FRANK G. SANFORD
Oneonta, New York

WEAVING

INDIAN BLANKET AND HEADDRESS

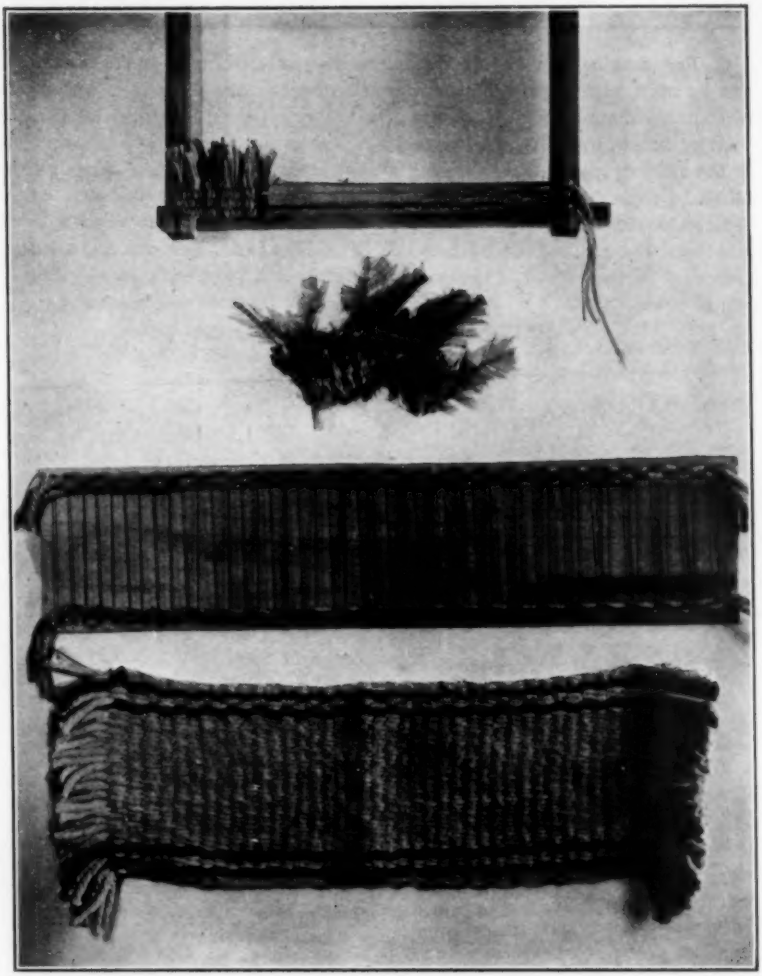
PROCESSES. Use of a continuous warp with short lengths of weft. A wooden needle for tool. Individual and co-operative work.

MATERIALS. Roving or jute yarn, strong cord or carpet warp, some nails and small pieces of board or a wooden box, chicken or turkey feathers.

ORAL LANGUAGE WORK. Talks on cotton and hemp, meaning and use of selvage. "In the Child's World," p. 421. Champlin's "Young Folks Cyclopedia," p. 370. "Textile Studies for the Schoolroom," p. 26. "The Hemp Industry in the United States," Department of Agriculture.

DIRECTIONS FOR MAKING

For the blanket loom use a board about the size of a shingle, 6″ x 18″. Place nails for the warp about one-half inch apart along the two long sides. This will insure an even selvage. Use strong cord, and warp from nail to nail, tying the beginning and the end of the warp cord to a nail. Allow 10″ of extra warp at each end for the finishing off. Cut the roving in strips for the weft lengths, measuring the full length of the loom plus the allowance for fringe (2″) at each end. Weaving needles are easily made by whittling to a point a strip of wood of the required length and making an incision to hold the thread. Weave over and under through the warp, placing the two strands for the selvages first. Weave towards the center until the warp is covered. In joining work when a new thread is needed, lap the weft about one inch, taking care to put the new piece under and over the same set of threads as the old. Finish off the blanket by button-holing the unfinished ends with the ten-inch piece of the warp cord that was kept for this purpose. Trim the fringe and remove the blanket from the loom.



Loom for Indian headpiece, 12" x 12". Indian headdress of colored jute and chicken feathers. Loom for an Indian Blanket, 5" x 15." Indian Blanket.

For making the Indian headpiece almost any individual school loom can be used, also a strip of wood or of straw board. Place four continuous warp cords about one-half inch apart and of any desired length. Cut the jute yarn or roving into six-inch lengths. Weave through the warp, coming back to the starting point, thus forming a selvage on one side and a fringe on the other. Continue to weave until the head band, about two inches wide, is completed. Remove from the loom, sew the ends together to form a circle and insert the quills of the feathers into the woven band. By weaving a longer piece and allowing one end to hang down the back a more elaborate headdress can be made.

KATHARINE FRENCH STEIGER
Director of Domestic Art
Rochester, New York

NEEDLEWORK

ENGLISH PEASANT COSTUME

CHRISTMAS EVE IN THE OLDEN TIME

On Christmas Eve the bells were rung;
On Christmas Eve the mass was sung;
That only night in all the year,
Saw the stoled priest the chalice rear.
The damsel donn'd her kirtle sheen;
The hall was dress'd with holly green;
Forth to the wood did merry-men go,
To gather in the mistletoe.
Then open'd wide the Baron's hall
To vassal, tenant, serf, and all;
Power laid his rod of rule aside,
And Ceremony doffed his pride.
The heir, with roses in his shoes,
That night might village partner choose.
The fire, with well-dried logs supplied,
Went roaring up the chimney wide;
The huge hall table's oaken face,
Scrubb'd till it shone, the day to grace,
Bore then upon its massive board
No mark to part the squire and lord.

Then came the merry masquers in,
And carols roar'd with blithesome din.
If unmelodious was the song,

It was a hearty note, and strong.
Who lists may in their murmuring see
Traces of ancient mystery.
White shirts supplied the masquerade,
And smutted cheeks the visors made;
But oh! what masquers richly dight,
Can boast of bosoms half so light!
England was merry England when
Old Christmas brought his sports again.

Sir Walter Scott.

Christmas! What a start the word gives us, yet if we are to have any Christmas plays or dances, it is quite time we were making our plans.

The selection from Sir Walter Scott's "Christmas Eve in the Olden Time," gives us a slight idea of what the Christmas celebration meant in "Merry England." Many of our own present day customs of the Christmas season, notably that of decorating our homes with evergreen and mistletoe, have come down to us from our English ancestors.

England was not alone in its observances of Christmas, for the season has been taken note of in all countries from very early times. The date was fixed at a time of year when the ancients were accustomed to hold many of their festivals, particularly that in honor of the Sun. The Saxon nations and other northern countries kept a festival at this time of year in honor of the god Thor. This festival was called "Yule" or "Jule," and was marked by both religious and secular observances. The Romans, Greeks, Mexicans, Persians, and Chinese all had similar festivals, and in all countries it seems to have been a time of equality, with no class distinctions, and presents were given and received, much as we give Christmas presents now; moreover there still remains the same strange mingling of the divine and the secular.

An interesting account of a Christmas in 1348, kept by King Edward III of England at Guildford, is as follows:

"Orders were given to manufacture for the Christmas sports, eighty tunics of buckram of different colours, and a large number of masks, some with faces of women, some with beards, some like angel heads of silver. There were to be mantles embroidered with heads of dragons, tunics wrought with heads and wings of peacocks, and embroidered in many other fantastic ways. The celebration of Christmas lasted from All Hallow's Eve, the 31st of October, till the 3rd of February. At the court a lord of misrule was appointed, who reigned during the whole of this period, and was called 'the master of merry disports.' He ruled over and organized all the games and sports and during the period of his rule there was nothing but a succession of masques, disguisings,

and dances of all kinds. All the nobles, even the Mayor of London, had an officer of this kind chosen in their households. Dancing was a very favourite amusement. It was practised by the nobility of both sexes. The damsels of London spent their evenings in dancing before their masters' doors, and the country lasses danced upon the village green." Such was a Christmas celebration more than five centuries ago!

It is more than likely that the Christmas plays and pantomines so much in vogue at the present time, date from the reign of Henry VI of England, when a Christmas play was produced at Middletown Tower, Norfolk. It was enacted on Christmas Day, 1445, and the costumes and scenery, which were quite elaborate for those times, were made expressly for the occasion.

At the Court of Queen Elizabeth, William Shakespeare was one of the Christmas players, and the Queen took great delight in his plays.

Very early in the reign of James I, Shakespeare's plays, which had formed such a part of Court entertainments, gave way to performances called "masques," which however, were of a much higher character than the masques of earlier times, and the nobility were frequently among the performers. These masques formed the principal part of the Christmas entertainments at the Court of James I.

At the time of Queen Anne, we see something of pantomines in the puppet shows, and other scenic exhibitions with moving figures, which were among the Christmas amusements.

And so on, through all the centuries, we still find the festival idea dominating the season.

Why not bring this Spirit of Play into our school work, and let Christmas plays and dances be worked out in connection with history, literature, and physical training!

It seems fitting that the costume for this season should be an English one, and the writer has selected that of an English peasant in the early part of Queen Victoria's reign.

The material used in the picture is a figured chintz for the dress, which has a surpliced waist. A white apron and white mob cap, of white lawn, complete the costume.

DIRECTIONS FOR PATTERN

Figure 1. Front of waist. Take paper 8″ long, and 6″ wide. Letter corners as in chart. Line AB = front edge of surplice front. Point 1 = 3″ from A. Point 2 = 4 1-4″ from A. Point 3 = 1 1-2″ from 2. Point 4 = 1″ from 3. Point 5 = 1-2 distance 3 to 4. Point 6 = 1-4″ from 5. Point 7 = 3 1-2″ from C. Line A-1 = shoulder. Line 3-7 = under arm. Curve 1-4-3 = front of armhole. In cutting, fold selvages together, and place line AB even with selvage, allowing for hem. Shirr shoulder to fit shoulder of back.

Figure 2. Back of waist. Take paper 3″ long, and 4″ wide. Fold through centre into oblong, 3″ long and 2″ wide. Letter as in chart. Point

FIG 2

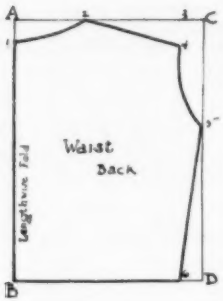
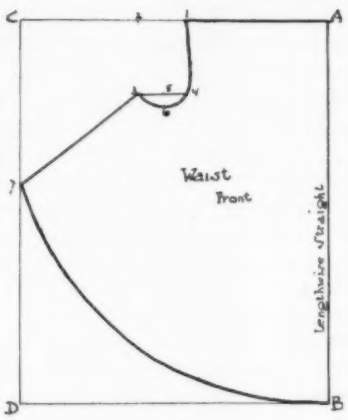


FIG 1



PATTERNS FOR 19" DOLL
SCALE ½" = 1"

FIG 3

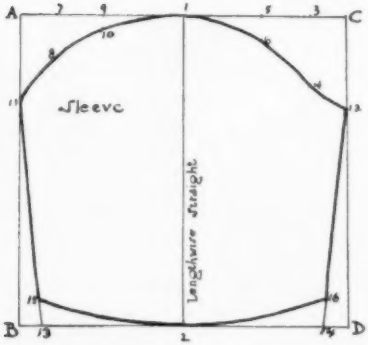


FIG 4

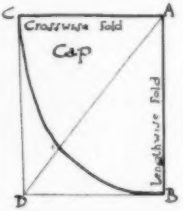


FIG 5

1 = 1-2″ from A. Point 2 = 1 1-2″ from A. Point 3 = 3 1-2″ from A. Point 4 = 1 1-2″ from 3. Point 5 = 2 1-4″ from C. Point 6 = 1 -2″ from D. Line 1-B = center of back. Line 2-4 = shoulder. Line 5-6 = under arm. Curve 1-2 = neck. Curve 4-5 = back of armhole. In cutting, place centre of back on lengthwise fold of material. Face back of neck with bias strip of material.

Figure 3. Sleeve. Take paper 6 1-2″ long and 7″ wide. Letter corners as in chart. Point 1 = center of line AC. Point 2 = center of line BD. Point 3 = 3-4″ from C. Point 4 = 1 1-2″ from 3. Point 5 = 1 3-4″ from C. Point 6 = 1-2″ from 5. Point 7 = 3-4″ from A. Point 8 = 1″ from 7. Point 9 = 1 3-4″ from A. Point 10 = 3-8″ from 9. Point 11 = 2″ from A. Point 12 = 2″ from C. Point 13 = 1-2″ from B. Point 14 = 1-2″ from D. Point 15 = 4″ from 11. Point 16 = 4″ from 12. Lines 11-15 and 12-16 = inside seam of sleeve. Curve 11-1-12 = top of sleeve. Curve 15-2-16 = lower curve to be gathered into deep cuff. Shirr across sleeve about half-way down, running shirrings even with lower edge. In cutting, place line 1-2, lengthwise straight on goods (even with selvage).

Figure 4. Cap. Take paper 7″ long and 6″ wide. Fold lengthwise and then crosswise, and letter corners as in chart. Draw diagonal AD. Point 1 = 1 1-4″ from D. Curve C-1-B = edge of cap. In cutting, fold material in same manner as paper. Gather outside edge of crown, and sew onto a narrow tape, which has been measured to fit size of doll's head.

Figure 5. Cap Ruffle. Take paper 12″ by 1 1-2″ and fold in centre. Letter as in chart. Point 1 = 1″ from C. Point 2 = 1″ from A. Line 1-2-A = edge of ruffle to be shirred to fit head size. French seam back of ruffle 1-D. Hem 1-2″ wide on straight edge BD, allowed for. Trim with narrow black ribbon and bow in front.

In cutting, line AB may go on either lengthwise or crosswise fold of material. Make skirt straight and full to reach to the ankles.

For placket of skirt, and directions for apron, refer to September number of The School Arts Book.

A three-cornered kerchief of soft, white material, may be worn inside neck of waist, the surpliced fronts crossing over kerchief.

For a full size pattern (to fit a 10 or 12 year size), these dimensions may be multiplied by 3.

BLANCHE E. HYDE
Newton, Massachusetts

METALRY

SCARF PIN

NOVEMBER is the month when we begin to think of Christmas gifts. Our friends appreciate the gift made by the giver a great deal more than one purchased at the shop, and a piece of good jewelry is always appreciated, so we will have our problem this month the making of a scarf pin.

Any kind of pin, if long enough, would answer the purpose of a scarf pin, but it has always been the custom to make it an ornamental thing as well as useful. The essentials of a scarf pin are a stone, precious or semi-precious, a setting and a pin. Semi-precious stones are now to be found at reasonable prices and when appropriately set make a very attractive bit of jewelry.

The size and shape of the setting is determined by the size and shape of the stone, so that it is necessary from the beginning to have the stone. There are a great many ways of making settings, but only the simplest kind will be described here. Many semi-precious stones look very well set in silver, so for this problem silver will be used. Silver is worked about the same as copper, except that it melts at a lower temperature so it requires a little more care in soldering.

To make the setting for this pin, cut a strip of 26-gauge silver about one-eighth of an inch wide and long enough to go around the stone. Using the round nose plyers, bend one end of the strip, first as shown at A, Plate 1. and then as shown at B, having it fit the stone closely. With the shears cut off the end that laps over, leaving the strip in the shape shown at C. The joint is then soldered. As this is the first time it has been necessary to introduce soldering in the workshop problems, it will be necessary to leave the setting for a while and learn the process of soldering by practising with copper.

Take a strip of 20-gauge copper about three inches long and one-quarter of an inch wide and bend it into shape similar to the setting for the pin. After

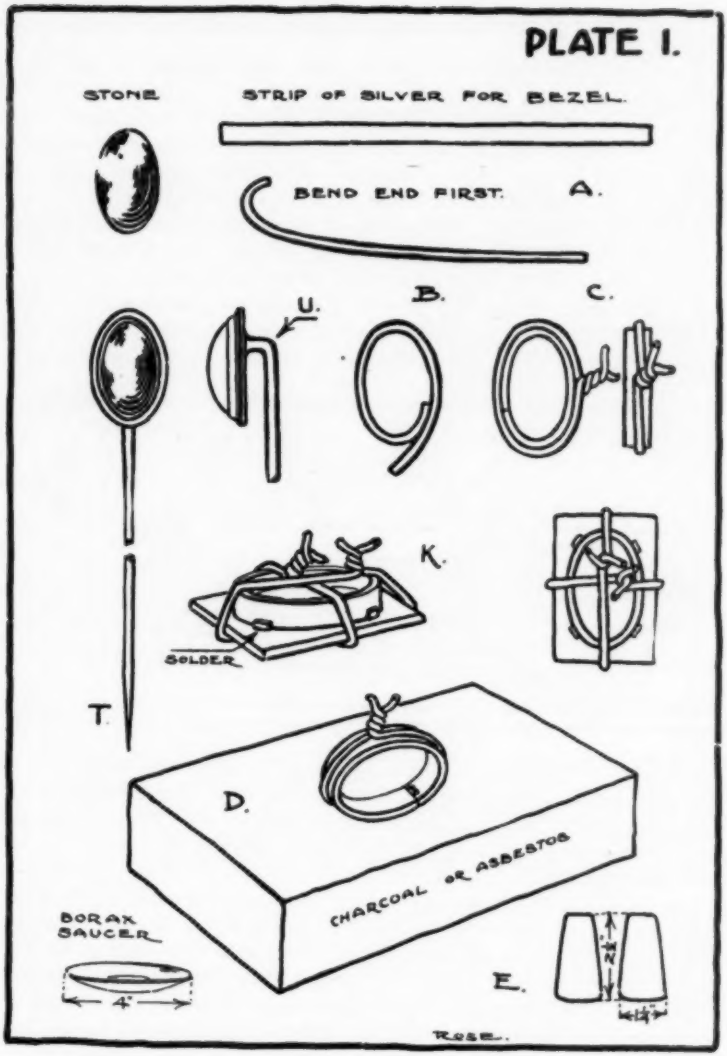
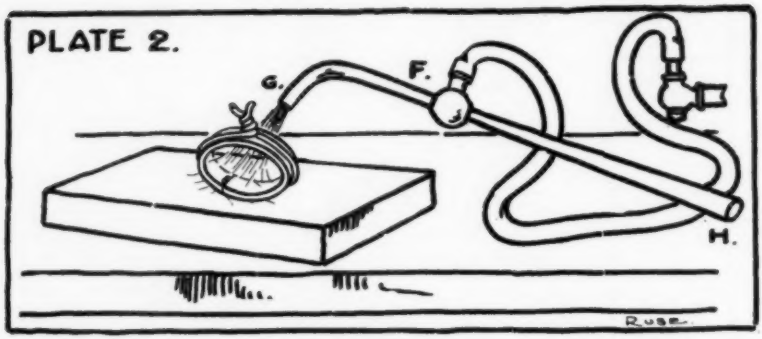


PLATE I.
STONE
STRIP OF SILVER FOR BEZEL.
BEND END FIRST.
A.
B.
C.
U.
K.
SOLDER
T.
D.
CHARCOAL OR ASBESTOS
BORAX SAUCER
4"
E.
ROSE.

filing the ends square and coating with borax, bind together with No. 28 iron binding wire as at C. Care must be taken to keep the fingers away from the joints as any moisture or greasy substance will prevent the solder from flowing. The best results are obtained only by being extremely careful as to cleanliness throughout the process. Take a small saucer or some shallow dish and place in it about a half teaspoonful of powdered borax and add about twice as much water. With a spoon on a block of wood shaped like Figure E, Plate 1, stir or grind the borax until it becomes like thin cream. With a small, soft hair brush, coat the parts to be soldered, being careful to get no more borax about than is necessary. The solder may be obtained any thickness, but 22 or 24 gauge answers for most purposes. After cutting the solder into pieces of the required size, drop them in the saucer with the borax to give them a coating



of borax and to remove any grease that may have adhered to them. After binding as stated above, place the ring or band on a piece of asbestos board or charcoal block, Plate 1, D, and apply a small piece of solder to the joint, about one-eighth of an inch long and one-sixteenth wide in this case. A mouth blow pipe, Plate 2, F, is now needed to supply the heat. The blow pipe may be connected to any ordinary gas jet with rubber tubing. After turning the gas on and lighting at G, the end H is placed in the mouth. By blowing at this end it dilutes the gas with air and increases the intensity of the flame. The size of the flame is regulated by the gas cock. After a little practice in the use of the blow pipe, the copper joint already prepared may be soldered. In soldering, the heat should be applied very slowly at first until the water has evaporated and the borax crystallized and dissolved. The flame may then be

applied more directly and the object brought to the soldering heat. If the heat is applied too quickly it will throw off the solder; and if heated hotter than necessary it is liable to melt or burn the parts being soldered, so the process demands very close attention from the start.

After removing the wire, the ring is pickled*, washed in clean water and dried. The joint is then filed inside and out to remove any surplus solder that may have run about the joint. For a little further practice before going back to the setting for the pin, the ring we have just made may be soldered to a piece of copper as shown at K Plate 1. Cut a piece of 20-gauge copper about one-quarter of an inch larger than the size of the ring. File one side of the ring flat. Place the ring on the flat piece of copper keeping the distance from the ring to the edge about equal on all sides. Mark around the ring, leaving a line on the flat piece. Remove the ring and scrape bright the portion where the joint is to be with an old jackknife. Coat the scraped part with borax, also the filed face of the ring, and place them together and bind with wire as shown at K, Plate 1. Cut four pieces of solder about the size of the first piece used, coat with borax and apply at equal distances about the ring, either on the inside or the outside. The flame is then applied and the copper is soldered as before.

After this practice in soldering, the setting or bezel for the pin is taken up again and carried along in just the same way as described in the soldering process. The bezel at C, Plate 1, is soldered, pickled, and the joint filed up.

One face is filed true and soldered to the back of the setting as at K. It is then pickled to clean it and remove the borax. Next, saw around the bezel, leaving a little over one-sixteenth of an inch all the way around, as at L, Plate 3. The joint is now filed up and the edge filed true and then beveled a little as at M. The wire for the pin is now straightened and one end soldered to the back of the setting a little above the centre, N. Clean the place where the joint is to be, coat with borax and place a small piece of solder close to the wire as at N, which is held in position with the plyers. The flame is applied till the solder flows all around, making a good strong joint as at O. It is again pickled for the last time.

The outer edge of the bezel at the top is next beveled or filed to an edge, P, Plate 3, to do away with unnecessary thickness. The stone is next put in place and the bezel burnished over the edge. This is done first by taking a small tool, R, with a square end, called a pusher. With this tool the setting

*See problem in October Workshop.

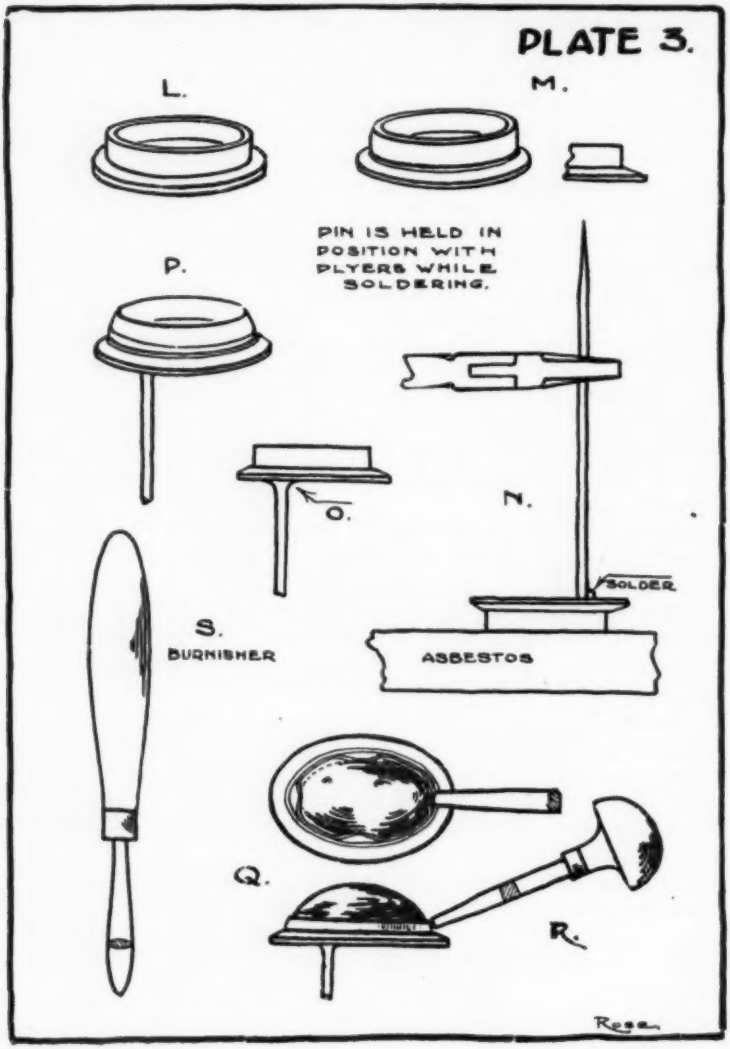


PLATE 3.
L.
M.
PIN IS HELD IN POSITION WITH PLYERS WHILE SOLDERING.
P.
O.
N.
SOLDER
S.
BURNISHER
ASBESTOS
Q.
R.
Rose

is pushed toward the stone, first at four points corresponding to the ends of the short and long diameters as at Q. This is repeated at the intervening spaces until all parts of the setting are touching the stone. A tool called a burnisher, S, is then taken, and with this the setting is rubbed or burnished down perfectly smooth. It will be necessary to use a smooth file here and there to finish any rough places. The end of the pin at T, Plate 1, is now pointed, beveling it about three-eighths of an inch from the end. Take a strip of wood about 7 inches long and one-half inch wide, tack a strip of felt or chamois skin on it and rub a little tripoli on the skin or felt and use this to remove roughness, and finally a little rouge to polish it. The pin may finally be left bright or grayed a little by oxidizing.* With the round nose plyers the pin is bent at right angles to the setting, as at U, Plate 1, the last thing.

AUGUSTUS F. ROSE

Boston, Massachusetts

MATERIALS. A semi-precious stone, a piece of sterling silver, No. 18 gauge, 5-8″ x 7-8″, a piece of sterling silver No. 22 gauge 3-16″ wide and 3″ long, a piece of No. 16 sterling silver wire. A small piece of hard silver solder (easy flowing), 12″ of No. 28 iron binding wire, 1 oz. tripoli, 1 oz. rouge and 1 oz. of powdered borax.

TOOLS In addition to our present equipment the following tools will be needed for this problem: Pair 4 1-2″ flat nose plyers, pair 4 1-2″round nose plyers, a burnisher, a pusher, pair tweezers, a brush, mouth blow pipe for gas, two feet rubber tubing, piece of asbestos board.

To enable those interested in this problem to get the necessary tools and materials, Mr. Rose will send them as specified above to any address on receipt of postal money order for $3.00 if ordered together. If ordered separately $1.00 for materials and $2.00 for tools. All correspondence to Mr. Rose should be addressed to 14 Woodbridge St., Cambridge, Mass.

* See October Workshop.

HELPFUL REFERENCE MATERIAL

Christmas Stories

Bible, Luke ii; Matthew ii; December numbers of the Book; Bailey, 1902; Mackenzie, 1903; Hayes, 1904; Moore, 1905; Campbell, 1906; Birchall, 1908.

Christmas Symbols

Christmas Packet, The Davis Press, Publishers. Book, December 1901; December 1905; December 1906; December 1908.

Christmas Gifts by the Children.

Bailey, Book, December 1901; Baker, Book, December 1908.

Christmas Cards

Book, December 1902; December 1904.

Calendars

Book, January numbers, 1902, 1903, 1904. Parallel Course Drawing Books, Hammock, I, p. 36; II, p. 34.

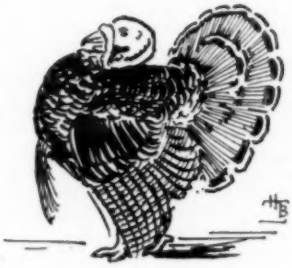
Lettering

Perry, Book, January 1904; Haney, Book, January 1904; Daniels, Book, May 1905; Hall, Book, April 1909. See also Outlines in October number, 1905; and Supplement, Christmas number, 1906. The Teaching of Lettering, Brown, Council Year-Book, 1906. Letters and Lettering, F. C. Brown. Grammar of Lettering, Lyons. Lettering and Writing, Smith. A B C of Lettering for Public Schools, Bull.

Things to Make

Described and illustrated in the Book. Articles by Brown, Newell, Jenks, in December 1905; Messenger, November 1905; Sanford, April 1906; Soper, May 1906. See also Outlines in November and December numbers of the Book, and the Workshop each month 1908–1909. Primary Hand Work, Seegmiller; Elementary Sloyd and Whittling, Larsson; Problems

in Woodworking, Murray; Industrial Work for Public Schools, Holton and Rollins; Educative Handwork Manuals, Chamberlain. Council Year-Book, 1907: Toy Making as a Form of Constructive Work, Garritt; Centers of Interest in Handwork, Boone; Constructive Work in Town Schools without Special Equipment, Soper. Parallel Course Drawing Books, Hammock. The Manual Arts for Elementary Schools, Hammock.



NOVEMBER

THESE are the days when skies put on
The old, old sophistries of June,—
A blue and gold mistake!

Emily Dickinson's Indian Summer

1 MON — **All Saints' Day. Bastien Lepage b. 1848. Bryant b. 1794.**
His great Joan of Arc is in the Metropolitan museum

2 TUE — **Matilda d. 1083. Benvenuto Cellini b. 1500. &**
Queen of William the Conqueror, who pictured his mighty deeds on the Bayeaux Tapestry.

3 WED — Florentine hot-head, soldier, traveler, goldsmith, who played the flute, & created and cast in bronze the great Perseus.

4 THU — **Guido Reni b. 1575.**
Creator of the Aurora.

YET one smile more, departing distant sun,
One mellow smile through the soft vapory air,
E'er o'er the frozen earth the loud winds run,
Or snows be sifted o'er the meadows bare.

William Cullen Bryant

5 FRI — **Hans Sachs b. 1494.**
The Cobbler who sang and wrote songs; about whom Wagner wrote the music in the Meistersingers.

6 SAT

7 — **Paul Baudry b. 1828.**
French painter: great draftsman.

'Tis time to light the evening fire,
To read good books, to sing
The low and lovely songs
that breathe
Of the eternal spring.

Alice Cary

8 MON — **Thomas Bewick d. 1828.**

9 TUE
English wood-engraver, to whom we owe the revival of the art. His best cuts in the General History of Quadrapeds have never been excelled in their peculiar merits.

10 WED — **William Hogarth b. 1697.**

11 THU
Engraver and painter. The satirist of the brush. As serious in his art as he was faithful in reproducing the foibles and furniture of his day.

12 FRI
Lofty trees I see barren of leaves,
Which erst from heat did canopy the head,
And summer's green all girdled up in sheaves.

Shakespeare.

13 SAT — **Robert Louis Stevenson b. 1850.**
Brave and sweet artificer in words. The invalid who sounds always the ringing note of health: beauty and joy in nature and in life.
"To travel hopefully is a better thing than to arrive."

Stevenson.

14 — **Claude Monet b. 1840.**
French landscape painter. The rallying point of Impressionism

15 MON

Flowers in the summer, Fires in the fall!

NOVEMBER

Lo, shining flowers upon my window pane
The silver pencil of the winter draws.
Stevenson

16 TUE ◗ "Eastlake" implies the Dark Ages of Interior Decoration on which at length the light of Wm. Morris dawned.

17 WED ◗ **Sir Charles Eastlake b. 1793.**
English painter and writer.

18 THU ◗ **John Gutenburg b. 1410.**
The pioneer of printing. Mainz, Germany.

19 FRI ◐ **Bertel Thorwaldsen b. 1770. at sea.**
Icelandic sculptor, whose father and early teacher was a carver of figureheads for ships. ⇒ His monumental-museum is the chief attraction at Copenhagen.

20 SAT ◐

21 ✠ ◐ **Claude Lorraine d. 1682.**
He effected a revolution in art by simply setting the sun in the sky.
Ruskin

22 MON ✲ ◐ *An edict of the Lombard king, signed Nov. 22nd, 643, fixed the liability for accident during building upon the Comacini Masters. ✲ On their organization,—the great guild of Cathedral Builders,—modern Freemasonry is moulded. They used Solomon's knot as a symbol.

23 TUE ◐

24 WED ◐

25 THU ○ **Thanksgiving Day**
For the kindly fruits of the earth.

26 FRI ○ **William of Wykeham**
Father of the public school system, and of the Perpendicular style of architecture. Founded ✲ New College, Oxford, the charter of which is dated Nov. 26, 1379.

27 SAT ○ **Horace d. B.C. 8.**
Immortal singer in Latin.

28 ✠ ○ **William Blake b. 1757.**
English mystic, poet, engraver, painter. His lyrics blazed the trail for Wordsworth and the Lake Poets.

29 MON ○

30 TUE ○ **William A. Bouguereau b. 1825.** WB
French painter. An inimitable draftsman.

Are ye the ghosts of fallen flakes of snow,
For which, through naked trees, the winds
A-murmuring go?
Or are ye angels bearing home
The host unseen
Of truant spirits, to be clad
Again in green?
Jn. B. Tabb.

Once more the liberal year laughs out
O'er richer stores than gems or gold;
Once more with harvest song and shout
Is nature's bloodless triumph told.
Our common mother rests and sings,
Like Ruth, among her garnered sheaves;
Her lap is full of goodly things
Her brow is bright with autumn leaves. ✲ ✲ ✲
And let these altars, wreathed with flowers
And piled with fruits, awake again
Thanksgiving for the golden hours,—
The early and the latter rain.
Whittier

THE pure soul shall mount on native wings ✲ ✲ ✲
Leaving a track of light for men to wonder at.
William Blake

PRISCILLA AND JOHN ALDEN

By

ALFRED FREDERICKS

Priscilla, the May-flower of Plymouth, modest and simple and sweet;
She, the Puritan girl, in the solitude of the forest.

* * * * *

Thus for a while he stood, and mused by the shore of the ocean,
Thinking of many things, and most of all of Priscilla;
And as if thought had the power to draw to itself, like the loadstone,
Whatsoever it touches, by subtile laws of its nature,
Lo! as he turned to depart, Priscilla was standing beside him.

Longfellow.

EDITORIAL

THANKSGIVING need not monopolize the attention during November, but for various reasons it is likely to, and the wise teacher will govern herself accordingly. In the minds of children, of country children especially, it looms large. The holiday, the visit to grandpa's, the meeting of the cousins, the feast, the games in which fathers and mothers participate, all these things help to magnify the importance of the day. It is indeed a splendid center of correlation. Read about the Feast of Ingathering in Chambers' Book of Days, and about the Harvest Customs in Walsh's Curiosities; read Fast and Thanksgiving Days of New England by W. De Loss Love, Jr., or Customs and Fashions in Old New England by Alice Morse Earle, and you will be embarrassed with suggestions for fruitful language work, design, and drawing.

The teacher is to be congratulated who has had the personal experience of Thanksgiving in the country. I wonder sometimes if the day can carry such a wealth of association for anybody else as it does for one who has lived on a farm in our northern zone. We usually get at least one adult storm of cold rain before Thanksgiving day,—a storm that convinces the most skeptical that winter is at hand. The trees rock and moan, the dead leaves are hustled along the

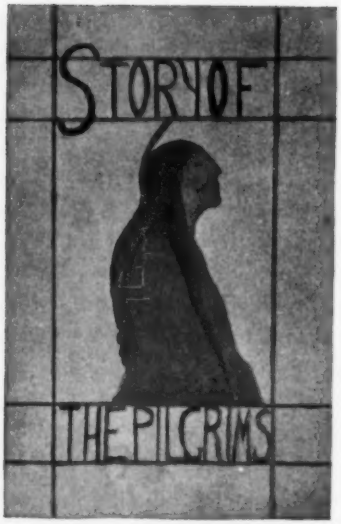
paths and whirled into melancholy heaps; the rain drives across the window panes; the wind growls down the chimney. This is the time when the good man of the house and all the members of his household begin to realize how thankful they ought to be. Borne in upon them as they sit by the bright open fire, after supper, with their books and home handicraft, is the consciousness of the snug barn stocked with odorous hay and contented cattle, of the tight shed piled high with dry wood, of the dim cellar rich with vegetables and fruit, of the attic shelves packed with preserves. All the necessities and luxuries of life are at hand. Every member of the family has helped to gather and store them in preparation for the long siege. Now let old winter do his worst! In that home there is enough and to spare.

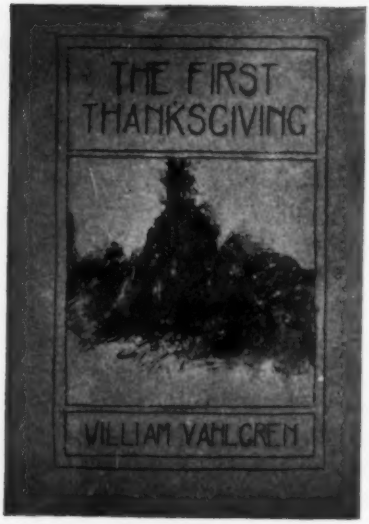
How can one who lives in a great city know what autumn really means? "With him life can scarcely be divided into seasons; time with him does not progress, it revolves. Of seed-time or harvest, of the reapers bending over the corn, or the grape gatherers threading through the vines, of the grass in the orchard made white with broken blossoms, or strewn with fallen fruit; of these he knows nothing." How can one who deals only with figures and books, with street cars and elevators, know what the harvest means? He lives from hand to mouth; without the few cents in his pocket and the café or the grocery around the corner he would starve. But perhaps one born and bred in the city sees another side quite as vividly as I see this. I hope so. I wish everybody could have such opulent memories of a home somewhere, as I have of mine here amid the Massachusetts hills.

In my teaching in cities, as the Thanksgiving festival approached, I used to say to myself, "Remember, remember. In hundreds of homes here this year there will be no turkey for

dinner, no nuts to fetch from the attic, no apples to bring from the cellar, no games with uncles and cousins." Ah, it is a problem, this teaching of children. What pictures shall we paint for them? How far should we go when we know that sensitive little souls here and there will be cut to the quick by the fearful contrast between our ideal and their actual? And yet, shall they not have the vision? "Timothy's Quest" would never have been had he not caught a glimpse, even in Minerva Court, of the White Farm. The slum, the crowded tenement, the yards and streets of ashes and brick alone, these are the nightmares of an already doomed industrialism. The fruitful earth where sunlight and shadow are pure, where rain falls on flowers, and birds sing at dawn, where the sweet air is health, and the jeweled night is peace, that is the normal thing, that is the thing that endures. The only city that "hath foundations" is the city with pure flowing waters, with gardens, with trees yielding their fruit every month. It is the city happily married to the country that will sit down in the Kingdom of God, not the city that squats in its own filth on the bosom of the earth and crushes the life out of it. Let us give the children the vision. "Where there is no vision the people perish."

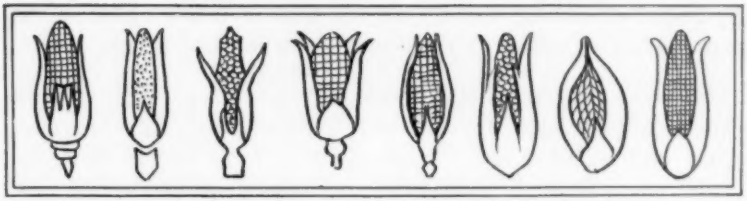
¶ The frontispiece this month is therefore a glimpse of the country from which all city children are fed. It was painted from nature, by Walter Sargent, a country boy, though now Professor of Education in Chicago University. The best essays produced last year at Thanksgiving time, though made in city schools, were essays dealing with the country, made by children who knew the country. But good work was done wherever there was a good teacher. A few specimens are reproduced herewith. The first illustration on page 292 is from the cover of an essay, The Story of the Pilgrims, by Willie Howell, residence and grade unknown. The second is from the cover of an illus-


STORY OF
THE PILGRIMS


THE FIRST
THANKSGIVING
WILLIAM VAHLGREN

HARVEST
FESTIVAL
• 1621 •

FURNITURE
OF THE
COMMON HOUSE
PLYMOUTH
1621

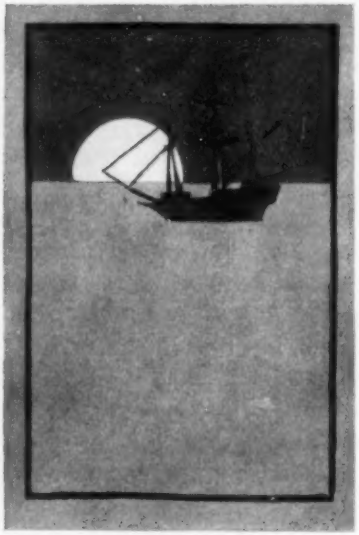


trated booklet on the history of the festival, The First Thanksgiving, by William Vahlgren, eighth grade, Fitchburg, Mass. The third illustration is the outside of a clipping file made by Katherine McNalley, 8th grade, Mt. St. Joseph Academy, Brighton, Mass. The fourth is the cover of an illustrated pamphlet containing drawings and descriptions for making the furniture of the Common House, Plymouth, by Anna Rothwell, 8th grade, Mt. St. Joseph Academy, Brighton, Mass. On this page is reproduced the cover of an illustrated menu, by William Franket, Derby, Conn. The head band on this page contains tracings from other covers made by pupils in William's class, 8th grade children, showing the variety of conventional forms derived from an ear of corn. The initial is grouped with an ornamental band from the cover of a language paper on King Philip, by Chester Bell, 9th grade, N. Wilbraham, Mass.

As much good discipline in handicraft, as much training of the taste

may be gotten out of the making of a beautiful booklet, in the upper grades, as out of any problem given in the Outlines.

¶ Whatever we do, let not common sense forsake us. I have reproduced here side by side two interpretations of the same subject, a Pilgrim ship in Plymouth harbor at the time of the



first Thanksgiving. One of these represents the craft by day, the other by night. The night scene is perhaps the more dramatic. It suggests that other historical picture, of another ship, as Longfellow describes it,

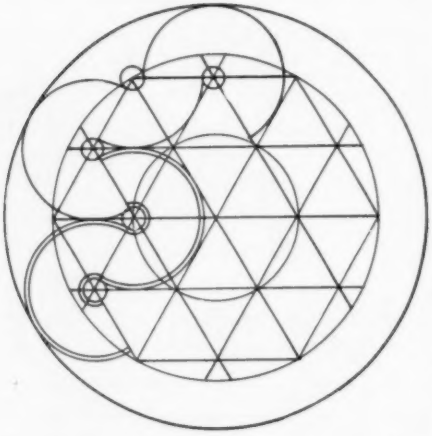
"Just as the moon rose over the bay,
Where swinging wide at her moorings lay
The Somerset, British man-of-war;
A phantom ship with each mast and spar

Across the moon like a prison bar;
And the huge black hulk that was magnified
By its own reflection in the tide."

I have placed these here for comparison. The night scene is an example of entirely legitimate paper cutting. The day scene is a drawing made with ordinary writing ink, by Violet Shuster, in a third grade, N. Manitowoc, Wis. The two exemplify results secured by teachers of two distinct types. The first is fond of paper cutting and applies it whether it happens to be the most direct and appropriate means of expression or not. The second is fond of good art. Think of the extra work involved in the cutting of the silhouette of the ship, and how crude after all the silhouette must be. The ship had to be drawn anyhow; how much better to draw it directly upon the paper with the brush. Many details of the vessel, especially of the rigging, had to be sacrificed in the cutting. All thought of reflections, either of the moon or of the black hulk (which Longfellow uses with such effect in his description), had to be overlooked. In the silhouette the selection of values was arbitrary according to the paper available; in the other the pupil had the educational advantage of producing his own values. When shall we learn that fine art is the result of the wise selection and skilful use of the medium, whether it be in the production of a primary grade illustration or in the building of a Greek temple? Let us not be swept off our feet by mere materials, or by love of novelty, or by love of stunts.

¶ The cover stamp this month is venerable; anybody can guess how old it is, but the wisest of archeologists would hesitate to fix a date more definite than "from 3000 to 1000 B. C." It comes from Crete, from Knossos, where men have lived since the Neolithic age. The design is reproduced from a drawing

I made in the museum at Kandia in the summer of 1908. I call it the Minoan Meander. It recurs frequently, slightly varied, upon all sorts of objects. In this particular case it was incised upon a circle of pure gold about three inches in diameter. The museum contains hundreds of such circles bearing incised designs from butterflies, cuttle fish, flowers, and stars, all conventionally drawn with the utmost care, for what purpose nobody is sure. I puzzled over the geometric construction of this a long time before I could sketch the figure accurately. Here it is. To draw it, one had better begin with the central circle! If anybody wants the meander to fill a circle of a given diameter, he will have to figure it out; it's too much for me! These Minoans were a wonderful folk. The first sea power, their capital was the only city of the ancient world yet discovered without walls. They held the carrying trade of the world for two thousand years before the little ark of Moses floated in the Nile. When their royal palace, the home of the Minotaur, was sacked by the Greeks under Theseus, who had discovered the key to that labyrinth by the help of Ariadne, the Homeric Age had scarcely dawned.



¶ Our November pictures, page 288, are from the originals in oil, by Alfred Fredericks, an American painter, whose work is neither abundant nor widely known. It has the excellence

of good draftsmanship and temperate color. The paintings are owned by Mr. Walter B. Ellis of Boston, by whose kind permission they are here reproduced for the first time. The figures of Priscilla and John Alden are so simply posed and so well defined that they may be copied easily for use in language papers or interpreted without difficulty into decorative elements for book covers.

¶ When the children are using wood in the construction of their toys and other objects this fall, it may help them to be a little more careful of their material to know something of the effort the United States government is making to preserve our forests. White pine, for instance, which was once considered inexhaustible, has fallen off 70 per cent. in cut since 1890, and more than 45 per cent. since 1900. Teachers of manual training would do well to get into touch with the Forester, Forest Service, Washington, D. C., and receive from time to time the government publications on this topic.

¶ The old geometric method of teaching drawing in the elementary schools abroad has given place to something akin to what the Europeans call the American method. No doubt the International Congresses on the teaching of drawing have had something to do with the transformation which has taken place in official programs. Teachers of drawing in this country will do well to consider rather carefully the new program recently put forth by the French government. We are indebted to Miss Mary C. Wheeler of Providence, R. I., for the translation. This program deserves special study. It will be observed that the French begin the study of the clothed model in the sixth grade, which corresponds roughly to our sixth grade. When the results of this work appear in their exhibit at the next International Congress, our pose drawing will look more than ever like play.

We have said in the past that the French work is superior to ours in technique but not in subject matter or spirit. Now that they have come over to practically our subject matter and spirit, it behooves us to emulate them in excellence of technique.

NEW PROGRAM FOR THE TEACHING OF DRAWING

The master will not have to introduce in the class all the models or all the details of the proposed exercises. It rests with him to make a reasonable choice appropriate to his taste and to the ability of his pupils. We have desired merely to indicate the considerable variety of the exercises which one can undertake to sustain the curiosity and to refine the sense of observation.

PREPARATORY DIVISION

First and second years. (Corresponding to our 2nd and 3rd grades.)

I. Drawings in black or colored crayons of very simple objects. The objects are placed before the pupils. Modelling.

II. Drawings from memory after the objects previously drawn.

III. Freehand drawings after lessons on certain things.

IV. Illustrated exercises; exercises in French, history or geography.

V. Freehand drawings made out of class.

ELEMENTARY DIVISION

Eighth and seventh grade classes. (4th and 5th grades.)

I. Drawings on paper in black or colored crayons of simple ordinary objects. Modelling of the same models.

II. Drawing from memory.

III. Drawings explanatory of lessons on particular things, history recitations, etc., made in class.

IV. Elementary decorative arrangements.

V. Illustrated exercises.

VI. Freehand drawings made out of class (crayon, pastel, water color, etc.).

FIRST CYCLE

Sixth and fifth grade classes. (6th and 7th grades.)

I. Drawings made in class from models:

a. Simple objects of ordinary use;

b. Zoological and botanical specimens;

c. Clothed living model
d. Models taken from the history of art (in the sixth grade those taken from Egyptian, Chaldean, Assyrian, Persian, Greek and Roman monuments; in the fifth grade those taken from Byzantine, Arabic, Roman and Gothic monuments).

II. Decorative arrangements.
III. Drawing or sketches from memory.
IV. Drawings made out of class (crayon, pastel, water color, etc.), especially illustrations of exercises.
V. Modelling.

Fourth and third grade classes. (8th and 9th grades.)

I. Drawings made in class from models:
a. Simple objects of ordinary use;
b. Zoological and botanical specimens;
c. Clothed living model;
d. Models taken from art monuments of the Middle Ages, the Renaissance, the 17th, 18th and 19th centuries;
e. Sketches in perspective after models utilized for geometrical drawing.

II. Decorative arrangements.
III. Drawings and sketches from memory.
IV. Drawings made out of class (crayon, pastel, water color, etc.), especially illustrations of exercises.
V. Modelling.

SECOND CYCLE

Classes of second and first grades (1s tand 2nd years, High School), philosophy and mathematics.

I. Drawings made in class:
a. Living model clothed, studies in whole and in detail;
b. Drawing from the cast: figures and monuments of antiquity, of the Middle Ages, of the Renaissance, of modern and contemporaneous times;
c. Studies from the drawings of the great masters (human figures and landscapes);
d. Drawings and sketches in perspective of physical instruments, of organs, of machines, of details of architecture;
e. Drawings from the magnifying glass and the microscope;

f. Drawings and sketches of landscapes under the professor's direction.

II. Decorative arrangements.

III. Drawings and sketches from memory.

IV. Drawings made out of class (crayons, pastel, water color, etc.).

V. Modelling.

VI. Study of reproductions of works of art. Visiting museums and monuments.

Art. 2. The present order will take effect October first, 1909.

Dated at Paris, January 6, 1909.

CORRESPONDENCE

Dear Mr. Bailey:— Stamford, Conn.

In response to your suggestion I send the lesson on dolls.

This lesson is best adapted to a second grade, i. e., second year in school, although I have received good results from some first year children after a second attempt.

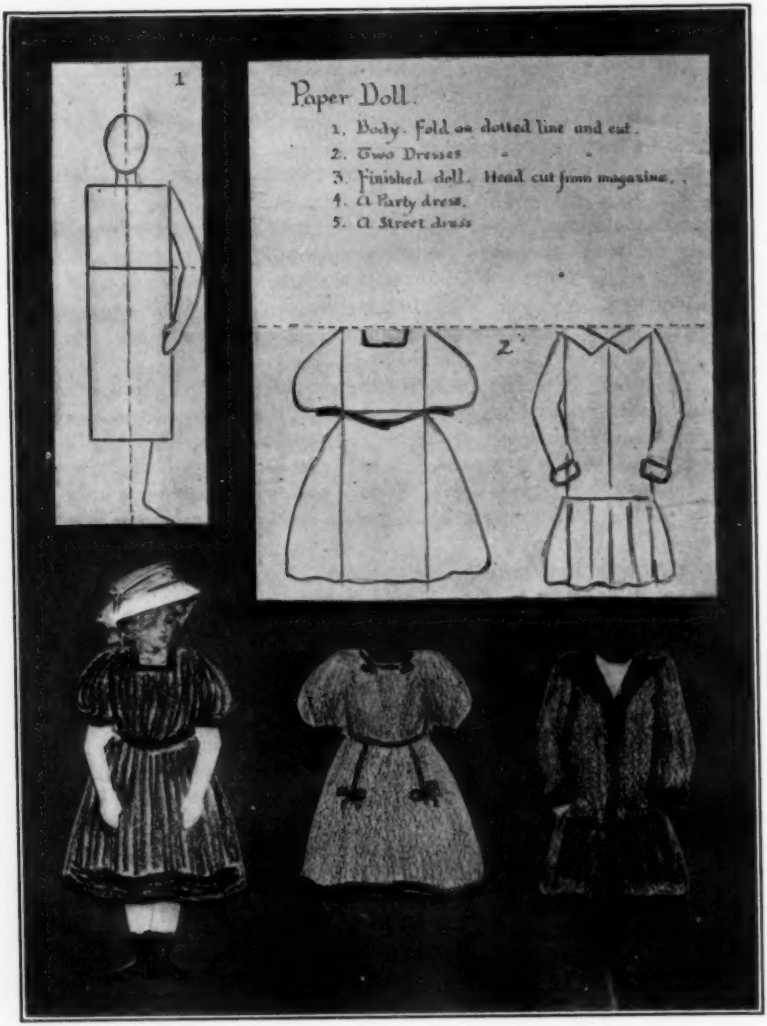
I was at first rather timid about presenting the subject to a mixed class, lest the male portion of my audience should feel its dignity assailed; but my fears were groundless; there was even more enthusiasm from that side of the house than from the presumably surfeited feminine contingent. One small boy, whose doting mother had confided to us that he had received fifty dollars worth of Christmas gifts, was questioned somewhat dubiously as to whether he liked his paper dolly. "Well, I guess," was his emphatic response, "I like it better than all my toys 'cause I made it myself. I take it to bed with me every night." So the lesson on paper dolls remains as its own best excuse.

In all lessons for young children there are crucial points where a doubled watchfulness is necessary to insure the success of the work. It will be a great saving of time if the children at the very beginning of their school career are taught to crease and tear paper accurately. In some lessons it may obviate the passing of scissors; then again, the torn edge will generally be more even than the one cut with scissors; lastly, besides developing dexterity, it is more expeditious.

MATERIALS FOR DOLL LESSON. One sheet white paper about 6″ x 9″, colored crayons, scissors, tablets; one 1″ square, one 1″ x 2″. Cut out heads from children fashion plates or other pictures.

DIRECTIONS. Papers on desks—tall (more comprehensible than vertical), fold lower edge up about so far—(teacher holding paper shows about two inches turned up at end), crease sharply and tear. Fold the narrow strip down the center, unfold and place on desk with the crease uppermost; place square tablet in the middle of lower edge of the paper and draw line along top of tablet; place oblong tablet upright on line just drawn and trace around three remaining sides; place square tablet above oblong and trace around square. Be sure that the crease passes through the center of these tracings. Draw neck and then oval for head.

As the paper is to be folded and cut double, the arm and leg need be drawn on one side only. The children experience most difficulty with the arms; directions should therefore be very explicit at this point; the entire lesson, line by line, should be presented large on the blackboard and, to obtain the best results, also on paper of the same size as used by the pupils.


1
Paper Doll.
1. Body. Fold on dotted line and cut.
2. Two Dresses
3. Finished doll. Head cut from magazine.
4. A Party dress.
5. A Street dress
2

Next, draw a slanting line from the shoulder to a point on line with the waist; place a dot half way down the side of the skirt (oblong), and draw from elbow to this dot; place a dot half way down between shoulder and waist line, from this point draw lines parallel to those just drawn; draw hand (simplified).

The leg and foot need no explanation, only the admonition to begin the line in the middle of half of the lower edge of the oblong and slant slightly toward the center. In cutting, leave the feet and legs in one piece to secure greater stability; the arm is cut around and up to the elbow.

For making the dress or coat select one colored crayon and one black; fold the larger paper in half, lay on desk with open edge towards the pupil and begin by placing the square tablet at the top so that it touches the fold not too near the left edge; trace around it lightly with the colored crayon; beneath the square, trace the oblong, then draw sleeves freehand, and follow with lines giving fulness of skirt; with the black crayon draw belt, collar, cuffs or other simple trimming; fill the dress in lightly with the colored crayon, being sure always to have the stroke follow the direction of the drapery; cut double and finish the back of the dress to harmonize with the front.

For a boy's kilt suit use the oblong at the top and the square below. When dressing the doll bring the arms forward over the skirt.

Helene Jensen Chaplain.

Dear Mr. Bailey:— Dalton, Mass.

I'm glad you were so much interested in the little Indian Village. I'm sending you another photograph of it, unfolded, as you suggested, also an outline of the steps in planning the village.

Let me state first the source of my ideas in the work. First, in connection with visits to Washington, D. C., I made a special study of the ethnological exhibits in the National Museum. These exhibits include a valuable series of life size groups of Indians, representing the customs, arts and industries of their race. Second, I knew Zit-kala-sa (Red Bird) personally. Therefore I was much interested in her "Memories of an Indian Childhood." These stories of her own life appeared at one time in the Atlantic Monthly.

The following are the developmental steps in construction of the village:

I. Aim—"Employment of all hands" on the work. Every child is sure to be able to help, in some way.

II. Interest—By conversational lessons, during "Hiawatha time."

III. Scene—Land of the Ojibways on the shore of Gitchee Gumee or Big Sea Water.

IV. Time—"The Moon of Falling Leaves."

V. Collection of material by teacher and pupils.

1. Bits of an old mirror to put in the sand table, for Gitchee Gumee.

2. Bare twigs for trees, also spruce or balsam twigs (preferably, the latter) for the forest.

3. Forked twigs and tiny cross bars, upon which to dry the pemican (meat of deer and buffalo).

4. Five-inch twigs for wigwams.

5. Moss and spruce or balsam needles, and nahma-wusk (spearmint),

if possible, to sprinkle around and help the woodsy fragrance. Sweet grass would also add to this.

6. Waw-beek (rock) and little pearl shells for wampum. Both of these might be placed on the shore.

VI. Construction Work—For the Indians, use penny jointed dolls, tinting them with brown water color paint.

1. Costumes—Rectangular pieces of paper twice as long as the dress is to be and wide enough to go around doll's waist. Fold the paper once the short way, in order to hang it over the doll's shoulders. Make a little cut in the centre of this fold parallel with long edges of piece, that the garment may be placed over the head. The photograph shows how the dress was fringed across the bottom and from the fold (on the edges) down to the waist line. Crayon was used to add simple stripes at the head of the fringe, the only limitation being the use of not more than three neighboring colors. This pre-

caution was taken to avoid the common but false idea that the Indians always used crude colors.*

Those children doing sufficiently well, were allowed to use chamois in the final costume.

2. Headdress of Indian braves—Small feathers were cut down and inserted in band of chamois. This was pasted to the head.

3. Bows—These were made of small reeds. Arrows—made of tooth-picks, with a bit of paper inserted in cut at the end.

4 Wigwams—Made of paper, from patterns, or by cutting out compass arrangements made by upper grade children. The wigwams should also be decorated with crayons. Two stages were shown in putting up the wigwams, one where only three poles were tied together, tripod fashion. Then while one squaw assists in carrying the poles, three others put them up. The real wigwams are made of leather. The canoes are made from patterns and decorated with crayons according to pictures the children may find.

5. Bowls for meal—Made of clay. Burnt matches were brought for charred sticks, to show that the Indians had just had their dinner.

6. Baskets of Nokomis—Made by sewing braided raffia.

7. Blankets—Made by sewing in simple line border of black and white in piece of red flannel. Third grade children might weave the blankets.

8. Picture writing for the Ojibway Meda (medicine man). This was first done on paper, then on birch bark. The writing was made up of the crude symbols (drawings of Indians and animals) which the Meda used to record his songs.

Long before the work is completed the children have gotten sufficiently into the spirit of things to appreciate the Indian word, Nush-ka! (Look! Look!) It is with great pride that they point out their handiwork, in the little village.

After the completion of models for the village, is the time when the children know how to illustrate (by drawing) the customs, arts, and industries of Hiawatha's people.

Respectfully yours,

Lena L. Andrews.

*Some of the tribes dressed in such a way that the color scheme of the whole family outfit, of costumes, was harmonious.

THE ARTS LIBRARY

BOOK REVIEWS

English Literature. By William J. Long. 582 pp. 5 1-2 x 8. Illustrated. Ginn & Co. $1.35.

This book is of interest to teachers of art for the reason that the author's aim is to promote a love of literature primarily as a form of art. In glancing through this handsome volume illustrated with examples of the work of the early scribes, including a frontispiece in color, the Canterbury Pilgrims, from a royal manuscript in the British Museum, portraits, and reproductions from The Making of the Book series by Alexander in the Congressional Library, one cannot but feel that the prophecy of Colonel Parker is beginning to be fulfilled. "The day will come," the Colonel used to say, "when our whole course of study will be reorganized on the basis of the arts." To those who have known Dr. Long only as a brilliant writer of nature studies, this scholarly work, evincing the most painstaking research combined with unusually keen appreciation of literary beauty, will be a surprise. The author abhors books and methods "which make sawdust out of living trees." The book throbs with life and is therefore intensely interesting. The few and brief selections exemplifying the art of the various authors are appetizing and awaken a desire for more. Dr. Long provides for the satisfaction of this desire by presenting a selected list of works during each period best worth the reading. The historical introductions, the summaries, the chronological outlines, the suggestive questions, the literary map of England, the bibliography, index, and key to pronunciation, are features which help to make this volume of such a character that it ought to be epoch-marking if not epoch-making in the teaching of English literature in the public schools.

The Basket Maker. By Luther W. Turner. 60 pp. Fully illustrated. The Davis Press. 75 cents.

This book, as appropriate in binding as was its companion in the series, Copperwork by Mr. Rose, is a reprint of the articles on basketry which have appeared from time to time in The School Arts Book. Mr. Turner is a master of his subject, having tramped with Indians for materials, worked with Indians for processes, practised with pupils for methods, and studied with specialists for tasteful results. The illustrations are surprisingly clear and orderly; the text does not contain a useless word. In all the completed baskets there is nothing slovenly or in bad taste. The book is an absolutely reliable guide to the production of thoroughly good work.

Modern Methods of Arts Instruction. By Henry T. Wyse. 140 pp. 5 1-2 x 8 1-2. Fully illustrated. Henry T. Wyse, Edinburgh. 90 cents.

This is pre-eminently the book for American teachers who wish to become familiar with the best results of art instruction in Great Britain. The book includes twenty-four pages of superior photographic reproductions of the work of pupils from five to eighteen years of age, selected from forty typical schools in Scotland. It contains chapters on observation and representation, subjects in nature and art suitable for study and representation, eight different mediums of expression, the arrangement of classrooms for art instruction, drawing materials, craft work, principles of practical instruction, etc. For those who attended the Third International Art Congress in London the book will have special interest, as its plates were taken from work there exhibited. The commendable spirit of the whole book is reflected in a single sentence: "The methods of instruction in drawing in common with all other subjects of education cannot be permanently fixed"; and the author while stating the main features of the most advanced practice of the present day, anticipates an even greater development in the future. The book is well printed and bound with attractive end papers, and the plates are the finest of any which have appeared from the London Congress Exhibit.

Instruction in the Fine and Manual Arts in the United States. By Henry Turner Bailey. 184 pp. 6 x 9. Bureau of Education, Washington. Bulletin No. 6 of the Series of 1909.

In reviewing this book here it may be best to quote Commissioner Brown's letter of transmittal to the Secretary of the Interior:

"In connection with arrangements for American representation at the Third International Congress for the Advancement of Drawing and Art Teaching which met at London in the month of August, 1908, an inquiry, mainly statistical in character, was made by this office, touching instruction in the fine arts and in the applications of art to handicraft in this country. The results of this inquiry have been digested by Mr. Henry Turner Bailey, of Massachusetts, who was one of the official representatives of the Department of the Interior at the London Congress. I have the honor to transmit Mr. Bailey's monograph herewith, and to recommend that it be published in the Bulletin of the Bureau of Education. The subject to which it relates is of the utmost

importance, not only to the upbuilding of American civilization in one of its finest forms, but also to the progress of many of those industries which underlie our civilization. While the returns upon which this monograph is based are by no means complete, even such presentation of the subject as has been found possible with the materials at hand will undoubtedly prove extremely serviceable."

A Graded Course in Mechanical Drawing for Grammar Schools. By Edmund Ketchum. Four sets of plates. The Milton Bradley Co. 25 cents per set.

"The purpose of these plates is to furnish the teacher the means of presenting to her class a series of mechanical drawings which develop the idea of how working drawings are made, of accurate measuring, and of neatness and good arrangement on the sheet. They have been planned especially for the busy teacher." The first set, prepared for grade VI, presents objects involving two dimensions only. Grade VII includes several objects requiring three views. Grades VIII and IX are based almost entirely upon objects involving three views. The objects chosen are related to the child's interests in school and at home, and are of reasonable design. Mr. Ketchum, formerly Supervisor of Drawing for the city of Lowell, is now in charge of the art department of the State Normal School, Framingham, Mass. This series of plates is the result of a successful experience and cannot but prove useful in teaching.

Box Furniture. By Louise Brigham. 304 pp. 5 x 7 1-2. 160 illustrations, 8 full-page insets. $1.74. The Century Co.

The author says, "Two summers on the island of Spitzbergen taught me more than all previous experiments, the latent possibilities of the box. Our camp was located seven hundred miles north of the Arctic circle. Cut off from other materials, the work daily grew in interest and I felt anew the truth, so familiar to all, that work to be of real value, must be honest, useful, and beautiful." The book tells how to make a hundred useful articles for the home out of ordinary wooden boxes. The illustrations are for the most part drawn freehand in outline by Edward H. Ascherman. The book is solid full of suggestions for the teacher of elementary woodwork. The publishers claim it to be the cleverest, most practical, and most helpful handicraft book yet written. In the words of Uncle Minot, "They mebbe ain't fur wrong."

RECENT PUBLICATIONS

WILD LIFE ON THE ROCKIES. By Enos A. Mills. An unusual book recounting the unique experiences of an extraordinary man. It is a book for nature lovers and teachers of nature study. If it contained but one chapter, The Story of a Thousand-year Pine, it would be worth a place on the teacher's desk. Houghton, Mifflin Co. $1.90.

CONVENTION PROCEEDINGS OF THE AMERICAN FEDERATION OF ARTS. This volume of 176 pages, giving the papers and discussions at the convention held at Washington last May at which this organization was formed, should be in the hands of every person interested in promoting a more beautiful life in America. The report of the discussions is so complete that one gets from it a flavor of the meeting itself. Among the speakers were the Vice-president of the United States, several senators, the Rt. Hon. James Brice, the Ambassador from Great Britain, Dr. Brown, Commissioner of Education, and people well known in the art educational world, Miss Mechlin, Miss Levy, Sylvester Baxter, Royal Cortissoz, William Woodward, Walter Scott Perry, and such famous men in the realm of civics as George W. Cable, Edward T. Hartman, and Horace J. MacFarland.

MANUAL TRAINING REPRINTS. Two pamphlets of this series have appeared, the first The Construction and Flying of Kites, by Charles M. Miller, an admirable monograph fully illustrated, and the second, Coping Saw Work, by Ben W. Johnson, which translates the old bracket saw into the realm of sound industrial art education. Both pamphlets present attractive work for boys and girls in the realm which Mr. Bennett happily calls applied mechanics for elementary grades. Manual Arts Press, Peoria, Ill. 20 cents each.

THE AMERICAN CITY. Vol. 1, No. 1. A new monthly has appeared from the press of The American City Publishing Company, 93 Nassau St., New York. Among the contributors are Hon. Henry B. F. MacFarland, President of the Commissioners of the District of Columbia, John Nolen, the landscape architect, Dr. Richard Watson Gilder, Dr. Benjamin Ide Wheeler, and Dr. Charles W. Eliot. This is another document which those interested in civic beauty should see.

MASTERPIECES IN COLOR. New volumes: Chardin, by Paul G. Konody; Fragonard, by Haldane Macfall. Each with eight reproductions in color. Frederick A. Stokes Co. 65 cents net.

DOURIS AND THE PAINTERS OF GREEK VASES. By Edmund Pottier. Translated by Bettina Kahnweiler, with an introduction on the relation of Greek vase-painting to Greek literature and Greek mythology by Jane Ellen Harrison. A study of the chief characteristics of Greek painting, with an account of the life and work of Douris, one of the most prominent of the fifth-century vase-painters. E. P. Dutton & Co. $2.50 net.

GREAT MASTERS' SERIES. First volumes: Great English Portrait Painters, Leaders of English Pre-Raphaelites, Three Great Florentine Painters, Three Great Portrait Painters, Three Great Modern Painters. Each volume contains sketches of three famous artists, with twenty-four reproductions in color of their representative work. Frederick A. Stokes Co. Per vol., $2 net.

HINTS ON HOUSE FURNISHING. By W. Shaw Sparrow. A book for those seeking to combine beauty with practical economy. Illustrated in color. John Lane Co. $2.50 net.

CHATS ON OLD EARTHENWARE. By Arthur Hayden. A complete manual of old earthenware, with chapters on its history and processes of manufacture, tables of manufacturers' marks, lists of prices, a bibliography, and indexes. Illustrated. Frederick A. Stokes Co. $2 net.

ARTISTS PAST AND PRESENT. By Elisabeth Luther Cary. The contents include: Antoine Louis Barye; The Art of Mary Cassatt; Max Klingen; Alfred Stevens; A Sketch of Jacques Callot; Carlo Crivelli; Fantin-Latour; Carl Larsson; Jan Steen, etc. Illustrated. Moffatt, Yard & Co. $2.50 net.

MASTER-PAINTERS OF BRITAIN. Edited by Gleeson White. About 150 large reproductions of pictures by famous British artists, from Hogarth to Byam Shaw, with introductions and descriptive text. John Lane Co. Paper, $3. net.

LITTLE BOOKS ON ART. New volumes: The Arts of Japan, by Edward Dillon; Illuminated MSS., by John W. Bradley. Uniform with the volumes previously issued:—Jewelry, Enamels, Miniatures, and Bookplates. Illustrated. A. C. McClurg & Co. Per vol., $1 net.

AN ART-CRAFT INDEX TO THE OCTOBER MAGAZINES

PERTINENT ARTICLES

A Course of Study in Manual Training, VII, Cheshire L. Boone, Manual Training Magazine, p. 46.

African Game Trails, Theodore Roosevelt, Scribner's, p. 385.

An Afternoon with Walter Crane, M. Irwin Macdonald, Craftsman, p. 33.

An Artist from Australia: Mr. Arthur Streeton, International Studio, p. 259.

A Reading Journey Through Egypt, II, Alexandria and Cairo, James Henry Breasted, Chautauquan, p. 203.

Art in Interior Decoration, Frank Alvah Parsons, International Studio, p. 18.

Art of Frederick Wilson and Its Message, The: An Appreciation, Minna C. Smith: International Studio, p. xcvii.

Art of Making Silhouettes, The, V. H. Wood, Palette and Bench, p. 8.

Art of Sculptors, The, Saint-Gaudens and Others, James William Pattison, World To-day, p. 1056.

A Stroll Through the Rijks Museum, Charles H. Caffin, Circle, p. 199.

Book as a Basis for Catalogue Making, The, A. L. Hennessey, Printing Art, p. 93.

Choosing the Ornaments for a Modest Home, Alice B. Muzzey, Suburban Life, p. 179.

Comparative Legibility of Types, L. J. Berger, Printing Art, p. 109.

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THE SCHOOL ARTS GUILD

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*Margaret C. Zoudlick, Easthampton, Mass.

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Marion Edwards, Haydenville
Onias Elwell, Warsaw
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THE NIGHT BEFORE CHRISTMAS

By George Koch